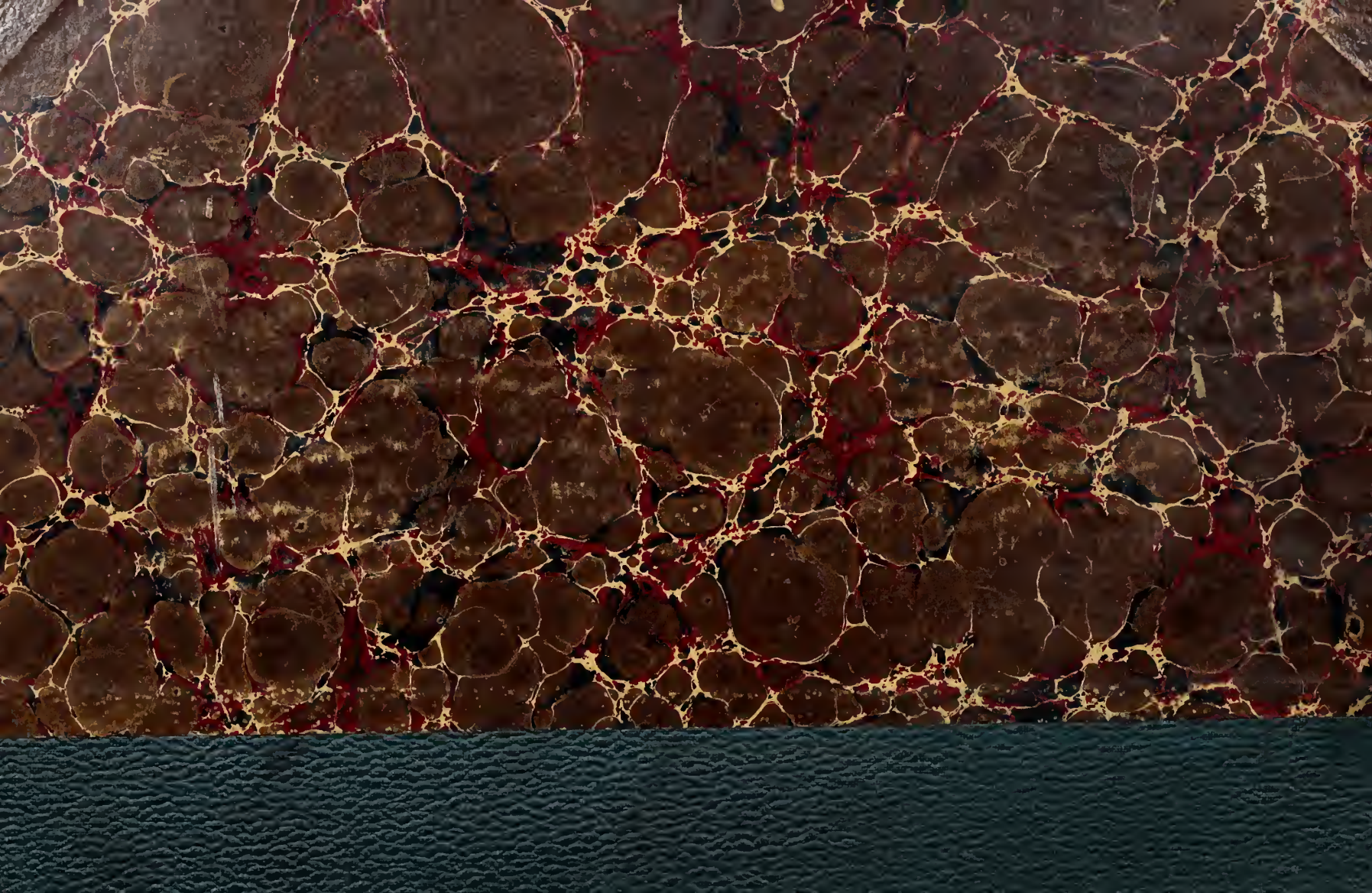

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THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

THE PLAGUE IN INDIA.

BY HUGO ERICHSEN, M.D.

India is again in the throes of the plague. Until the rainy season begins in the early part of June, gaunt pestilence will stalk through the land and mow down the natives by the thousands. Statistics show that 33,000 perish of this bubonic disease in India every month. Europeans generally escape, which is probably due to superior hygienic surroundings. Millions have died of the plague, since it first put in an appearance in 1896.

While the plague is deadly at all times, it attains its greatest virulence in March. Then evidences of the presence of the black death are met with everywhere—funeral processions to the towers of silence and the burning-ghats, British officials busily engaged in marking infected houses U. H. H., which means unfit for human habitation, the wailing of the suddenly bereaved, the suffocating smell of disinfecting materials, etc.

To place the situation before you in a nutshell, it may be said that the infected area includes nine British provinces and fifty-one native states. In the Bombay Presidency alone the total mortality from plague, for the ten months ending March, 1904, almost equaled that of the preceding year. In eight months, from June 1, 1903, until February 28, 1904, 251,415 persons succumbed to the pestilence in this part of India. What this means, in the way of an increase of the dreadful affliction, may be estimated from the fact that 281,269 persons died of it in the Bombay Presidency during 1903. According to the census of 1901, the population of this part of the empire is 21,539,199.

In the Punjab the deaths from plague numbered 141,897 from January 1 until May 2, 1903, according to a statement made by Lord George Hamilton, the Indian secretary in the

A Segregation Camp.

House of Commons. Unfortunately accurate statistics are not available, owing to the tendency of the natives to conceal plague cases whenever possible and the impossibility of obtaining correct reports from the remote interior. But an inkling of the truth may be gleaned from the statement that in one week—that ending March 19, 1903—40,526 deaths from plague occurred in all parts of India. Imagine, if you can, the horrors of such a state of affairs. The report of a medical missionary, lying before me as I write, contains the following sentence: "There are villages near here in which a third of the population has died of the disease within a few weeks."

Some towns are deserted, but in most cities the people rush out of their homes at the height of the epidemic and return again when the panic has subsided. However, familiarity breeds contempt, and soon even a disease that is almost universally fatal fails to make an impression on the stolid Hindu. Business goes on as usual, though many accounts may be wiped out in a single day by the decease of whole families. The indifference of the natives, their manner of living, and their opposition to the enforcement of sanitary rules, contribute to disseminate the pestilence from one end of the empire to the other.

Generally the plague originates in the native quarters, where men, women, and children are herded together as we would not herd dogs in a kennel. For example, a delegate commissioned to inquire into the plague haunts at Bombay reports: "In a room, the floor-space of which was 8x10 feet, there were four fires burning, one in each corner, for four separate families occupied this spacious room, one family living, sleeping, and cooking in each of the several corners." Thinking that surely here the maximum possible amount of overcrowding had been reached, the commissioner was shown, to his amazement, a room of exactly the same area where he was told by his guide that six families lived. By means of bamboo framework, suspended from the beams and hanging about three feet from the floor, space was made for two additional families, and in this way many other rooms in that tenement were made to accommodate six families. The doctor who accompanied the commissioner informed him that some of the families at times entertained visitors during the rainy season.

Not only are the natives absolutely careless as to precautions, but they seldom come to the dispensaries when they have the disease. Presumably they are afraid of being put in the sequestration camps. Some of the more benighted have been known to say that the government just puts them in those camps so that

INJECTING PLAGUE SERUM.

the officials may have an opportunity of killing them off with medicine. And in some places they even go farther than this, and directly accuse the English of being the cause of the plague.

As regards the origin of the dreaded pestilence, opinions are divided. Personally, I am inclined to believe in Captain Tucker's theory. That gentleman maintains that the plague bacillus gains access to man from the soil. He calls attention to the fact that in India, as in China, the soil is saturated with human and animal excreta, the subsoil poorly drained, a congested population living in close contact with the soil, their standard of health being lowered by insufficient and innutritious food, and their dwellings having poor light and ventilation.

Three elements combine to facilitate the spread of the disease—the distrust felt by Indian peoples toward the British government, failure to destroy creatures conveying the germ of the pestilence on account of veneration of life, and the prevailing custom of attending religious festivals. At the last mentioned, people come from all parts of India and give and take all kinds of diseases; hence they are veritable foci of pestilence, whence the plague is widely distributed. The care taken by Hindus not to destroy some of the lower forms of animal or insect life illustrates the absurdity into which overscrupulosity of conscience may lead its votaries. Although it has been proven conclusively that fleas, bedbugs, cockroaches, and other domestic parasites found in infected homes may convey the plague to man, the natives of India refrain from exterminating any of them, claiming that they have as much of a right to live as we have. They also flatly refuse to destroy the plague-infected rats, but have been induced to catch these rodents alive and to take them to a sort of public rat-pound on condition that the creatures be not killed. Mr. Jonathan Hutchinson, of London, investigated one of these places in Bombay. He called it a "rats' hell," and wisely concluded not to prolong his visit, for he regarded the risk of contagion by means of fleas in such a place as not slight.

The problem before the British government in India is the old one of striking the happy mean between rigorous sanitary measures and a revolt because of offended religious sensibilities. In the case of the plague, probably not much more can be done than to attempt to isolate and follow cases and their contacts.

As regards remedial and preventive measures, opinions are divided, as usual. Some authorities claim that inoculation with Haffkine's prophylactic has proven a failure, and that Yersin's and Lustig's serums are ineffective; others, including the Bombay

THE BOMBAY PLAGUE HOSPITAL.
(Doctor, Nurses, and "Ambulance" in Foreground.)

Chamber of Commerce, have petitioned the government to encourage inoculation, but nothing has been done. Moreover, the situation is aggravated by the fact that some British officials are openly hostile to inoculation. Under such circumstances nothing but sporadic inoculation could be looked for, and, in fact, nothing more was achieved. So far as I am aware, no really sustained effort on an adequate scale has been made to familiarize the people with the benefits of inoculation and to acquaint them with the slightness of the physical inconvenience attending it.

The Bombay Plague Research Laboratory supplied 5,252,259 doses of Haffkine's prophylactic to the various districts of India, in consequence of which, it is claimed, the death-rate of the plague cases was reduced to less than one-sixth of what it is among the non-inoculated. Captain S. B. Smith studied plague cases occurring in 102 villages of the Amritsar district. In these villages, he states, 1706 lives were saved by inoculation, the comparative mortality being 6.02 per cent for the uninoculated and only .49 per cent for the inoculated.

A careful study of the available statistics leads to the conclusion that while the Haffkine prophylactic undoubtedly confers some immunity, it is not an ideal preventive, compared, for instance, to vaccine virus. Moreover, the immunity is of short duration, and on an average does not last longer than six months.

Dessy, who had considerable experience with both preventives during the plague epidemic at S. Nicola (La Plata), expresses a preference for Lustig's vaccine, claiming that it confers greater immunity, may be kept in a dry state, and admits of a more accurate dosage.

The only remedy that has thus far proved of marked benefit in the treatment of the plague in India is adrenalin chloride solution. Kailos Chunder Bose, L.M.S., C.I.E., late president of the Calcutta Medical Society, says of it in *Therapeutic Notes,* Simla, India, vol. v, No. 1: "In many cases it has saved the lives of plague patients under conditions in which death appeared to be inevitable. . . . Adrenalin, given in all stages of the pestis, maintained the pulse admirably and steadily brought down the temperature. . . . In bubonic plague, uncomplicated with trouble of the lungs and intestine, adrenalin is a sovereign remedy, and often succeeds better than any other hitherto known drug."

When the plague is complicated by pneumonia it is particularly dangerous, so far as infection is concerned, because the bacilli are excreted in large numbers in the sputum.

HUMAN FUEL.

As the disease may suddenly extend to the lungs in ordinary cases, a strict isolation of every plague patient and a thorough disinfection of his excreta are imperative. Relatives of the diseased should be kept in quarantine and under inspection during the entire period of incubation—seven days. Great care should be exercised, too, in the disinfection of the dwelling, which must be extended to every part of the habitation, from roof to cellar. Any rat-holes that may be found should be filled with broken glass and permanently closed with cement.

If the plague were confined to man we could reasonably hope for its extinction, but as it is primarily a disease of rats its eventual extermination is questionable, unless some epizoötic may be discovered that is harmless to humans but fatal to the rodents.

It is interesting to note the variation in the mortality-rate produced by race. The Caucasians come first with the lowest death-rate. The Parsis, being the cleanest of the native races, have the next lowest, whereas the Jains, worshipers of life in every form, have the highest. From the beginning the Jains have been more affected by the plague than any other race in India, which may be explained by the fact that the disease is conveyed by ants that abound in their homes, and for whom they are known to provide artificial food.

One alarming symptom of the evil produced by the ravages of the plague has been the growing deficiency of labor in Bombay and other large cities. This is probably due, to a large extent, to the reluctance of people to come to a city notoriously and obstinately infected by a deadly disease.

The duration of the disease is generally short. A man is taken ill at one of the human beehives he calls his home. After being taken to a camp, variously called isolation, detention, or sequestration camp, he is found to be plague-stricken and carted to a hospital, where he is shown every attention. If he dies he is consigned to a primitive funeral pyre, with a callousness that strikes us Americans as almost inhuman, and can only be explained by the indifference born of overpopulation.

As soon as the intense heat sets in, at the beginning of the rainy season, the plague will be checked.

In conclusion I wish to express my indebtedness to the reports of the United States Marine Hospital Service, *Indian Lancet*, and the "Hand-buch der Pathogenen Mikroorganismen," Bd. iv, Jena, 1904, for material that has been incorporated in this dissertation.

MALARIA.

BY JOHN G. CECIL, B.S., M.D., LOUISVILLE, KENTUCKY.

A quarter of a century ago practically nothing was known about either the real cause of malaria or as to the mode of propagation. True enough the text-books and teachers of medicine were fully cognizant of the fact that malaria was a wide-spread disease throughout the tropical and temperate zones; that it prevailed in and near to swamps and marshes; that it was most prevalent during the autumnal season of the year; that moisture, heat, and luxuriant vegetation were conducive and necessary to its presence; and that in quinine we had a specific for its relief. But it remained for Laveran, a French army surgeon, in 1880 to recognize the specific causative organism, the plasmodium malariæ, and for "Ross, Manson, Grassi, and Bignami in 1898 to prove that the infection is spread from man to man by a certain species of mosquito known as the anopheles."

The statements above made convey no conception of the immense amount of work, the careful, painstaking investigations, and the ingenious experiments made by these men and many others, necessary to establish these facts as we now possess them.

That the plasmodium malariæ of Laveran is the only cause of malaria is no longer questioned, and the profession is now about ready to not only accept the mosquito as the means but the only means of the dissemination of this disease from man to man. Little is known of the life of the organism outside of the human body. In 1886 Golgi demonstrated the relation existing between the different stages of the malarial paroxysm and the cycle of development of the parasite in the human blood. There are now generally recognized three varieties of the malarial parasite, each of which passes through a cycle of development which in its general characteristics is common to all. The time required for the cycle of development varies from twenty-four to seventy-two hours, and the varieties are known as tertian, quartan, and estivo-autumnal, each variety having its own special parasite. The cycle of "development of an individual parasite begins in the form of small hyaline bodies within the red blood-corpuscles, possessing the power of ameboid movement and without color. Increase in the size of these bodies takes place, and coincidentally there is to be observed within them, near the periphery of the parasite, a collection of pigment granules. These granules increase in amount with the further development of the parasite,

and are frequently observed to be in active motion. . . . The parasite having reached its full development, the pigment granules within it begin to clump, usually near the center, and the stage of segmentation commences. When completed, the process divides the parasite into a number of oval bodies or spores, while the corpuscle which has acted as host bursts and the subdivisions of the parasites, or spores, are set free, the pigment granules remaining behind to float free in the blood serum, or to be taken care of by the process of phagocytosis. The spores thus set free very soon enter fresh corpuscles and there begin the cycle of development anew." It is this sporulation of a large number of parasites simultaneously that determines a malarial paroxysm. The time intervening between paroxysms is the time necessary for the full development of a spore in a fresh blood-cell. In the tertian type the time required is forty-eight hours; in the quartan seventy-two hours is necessary for the complete development of the spore. The daily paroxysm or quotidian type is explained by there being a double infection of the tertian parasite, or a triple infection of the quartan. All other types of intermittent malarial manifestation are capable of explanation, whether they be regular or irregular, by remembering the possibility of double or triple infection of one or both of these varieties.

During the chill and immediately thereafter the greatest number of individual spores may be found in the blood, thus giving us the cue as the most favorable time for the exhibition of the specific agent for the cure of malaria, viz., quinine, this drug being especially effective against the spores.

The study of the estivo-autumnal parasite, the parasite of remittent malarial fever, is beset with much more difficulty, for the reason that its cycle of development is carried on mainly within the internal organs, principally the spleen, liver, and bone-marrow. "It is smaller than the tertian and quartan organism and presents a ringed appearance. It contains much less pigment, and, moreover, it soon causes the corpuscle into which it enters to become shriveled and brassy looking. After a time, possibly a week, the parasite increases in size, becomes refractive, crescentic, or round, or ovoid in form, and in the center masses of dark pigment accumulate. It is these which are indicative of infection by the estivo-autumnal type, and it is to be remembered that as a rule they are not constantly present in the peripheral circulation, but only in the blood of such internal organs as the liver, spleen, and bone-marrow. It appears established

that these crescentic and ovoid bodies do not undergo segmentation or sporulation, and do not continue the development in the human being." Of these bodies some are male and some female, which meet in the body of the mosquito, there to undergo a cycle of development, and when this development is completed they may be deposited by the mosquito in the human blood. Blood cells are therefore attacked in two ways: by parasites formed during the asexual or human cycle, and by parasites in the sexual or mosquito cycle.

There are several groups of these estivo-autumnal parasites, and infection with two or more groups, each in a different stage of development, is of common occurrence, and a combined infection with one of the other varieties, especially the tertian, is occasionally seen.

The severest forms of malaria, the pernicious, malignant, bilious remittent, are due to infection, either singly or in combination of several, by the parasites of the estivo-autumnal type; and from this standpoint the estivo-autumnal parasite is by far the most important, although it is not as widely distributed and therefore not as commonly met with as the tertian and quartan forms, except in certain localities, which are usually tropical or semitropical.

Under proper surroundings, especially when the subject removes from the locality of possible infection, malaria of the tertian and quartan form may be regarded as a self-limited disease. The destruction of the malarial organism is effected partly by the process of phagocytosis and partly by the germicidal properties of the blood-plasma, but the relative importance played by each is not as yet entirely clear. That the blood-plasma may possess this effect is well demonstrated by the destruction of the young spores after the exhibition of quinine. The cells chiefly concerned in phagocytosis are the large leucocytes and cells derived from the spleen, liver, and bone-marrow, termed macrophages, as well as from the endothelium of the blood-vessel walls (Wilson and Ashton).

The estivo-autumnal forms differ from the tertian and quartan in that they show a marked tendency to become pernicious, and if left untreated often pass on to fatal termination, although of course there are many instances of spontaneous recovery.

The manner of infection of the malarial parasite is one of great importance, and until this question is settled prophylaxis that is effective can scarcely be hoped for. "It is agreed that infection may possibly take place by the entrance of the parasite

through (1) the digestive tract (the water theory), (2) the respiratory tract (the air theory), (3) the skin (the inoculation theory)." The weight of evidence obtained by many experiments is overwhelmingly against the probability that infection occurs by the digestive tract. The possibility of infection by way of the respiratory tract is much stronger and is still held by many. The sum of evidence collected by a great many careful observers at first blush appears to be unanswerable. Investigation of the air in malarious regions, however, while not conclusive, has given results that in a measure support this belief; "it may be stated, though, that the evidence for and against the respiratory theory of infection is inconclusive, and that positive proof is still wanting." Much of the evidence adduced in proof of this theory may be used in support of the third and last manner of infection, the inoculation of the infection by the mosquito. That is to say, the conditions favorable to the development of a bad air (malaria) are identically the conditions which favor the health and happiness of the anopheles family.

The limits of this paper forbid the recital of the facts collected and the experiments made substantiating the soundness of the theory that the malarial parasite is introduced into the human by the mosquito. "No more interesting experiments proving these facts can be adduced than those made by Patrick Manson on his son, who had never had malarial infection. Bignami and Bastianelli sent Manson in England relays of mosquitoes which in Italy had been fed upon the blood of patients suffering from pure benign tertian malaria. These mosquitoes were allowed to bite the younger Manson, and as a result he developed the same form of malarial fever as that suffered by the Italian patients, and the same parasite was found in his blood." It is admitted that the anopheles cannot inoculate his victim unless it has had the opportunity to first bite a person whose blood contained the plasmodium malariæ. Whatever views may be entertained regarding other channels of infection, the following statement of Bignami will express the present status of the subject: "This much at any rate we can assert, viz., that inoculation is the only mechanism of infection which has been demonstrated experimentally" (Wilson and Ashton).

The diagnosis of such forms of malaria as are usually seen in this part of the world is not as a rule attended by much difficulty. This, however, is true of the tertian and quartan types more than of the estivo-autumnal. The diseases liable to be mistaken for intermittent fever are: pulmonary tuberculosis,

septicemia, ulcerative endocarditis, and typhoid fever, in which rigors or sharp chills are present. In each one of the above named diseases it is not at all uncommon to witness a daily recurrence of chill, fever, and sweat corresponding to the ordinary paroxysm of intermittent fever. Too often a correct diagnosis is not made because of superficial, careless, and indolent methods of practitioners. Too often a diagnosis is "jumped at" as soon as a periodicity of this kind is established. An impression that is common among the laity and not uncommon among doctors is that this daily recurrence of chill, fever, and sweat can mean only malaria, and so the doctor assuming charge of a case finds a ready-made diagnosis, and be it said to his shame he accepts it without taking the trouble to verify it by diagnostic methods of accuracy and precision.

Another class of cases frequently seen are septic infections following childbirth. How often have we heard of malarial fever (?) developing on the third or fourth day after labor? The diagnosis of typhoid fever, milk fever, and malarial fever are so common that one would suppose that the processes of labor really had a causative effect in developing these diseases. The real truth is that the vast majority of these childbed fevers are nothing more nor less than septicemia. It is not denied that malarial or typhoid fever may and do occasionally complicate a labor, or that a latent malaria may be determined by a labor, but this is the exception to the rule. Carelessness and unclean methods are the causes of these misnamed malarial fevers, but it requires some courage and not a little humiliation to make this incriminating acknowledgment. Snap diagnoses are sometimes brilliant, much oftener wrong. Even in simple, easy cases it is seldom necessary to be in a hurry about the diagnosis. It is better to make haste slowly rather than to be committed to an opinion which must be changed in a couple or three days.

Another common practice to which all of us must more or less generally plead guilty, but which fortunately does not often lead to serious results, is when confronted with little fevers or trifling complaints, the causes of which are not readily apparent, to say: "Oh, that is just a little malaria." The people themselves have drifted into the habit, not without good reason, of saying: "When you doctors don't know what is the matter you just call it malaria and give a little quinine." Would it not be better, more honest with ourselves and our clientele, to candidly acknowledge our limitations, rather than to make diagnoses of malaria regardless of season, exposure, and the preva-

lence of mosquitoes, especially when diagnostic resources have not been exhausted?

In differentiating between intermittent malarial fever and other diseases in which there is a periodicity in recurrence of the leading symptom, the clinical history of the case, the physical signs in the lungs, and the fact that the attacks of chills and fever do not cease if quinine is given, and especially if the microscope reveals the presence of the tubercle bacillus in the sputum, prove that malaria is not the cause of the illness, but rather pulmonary tuberculosis, which is about as common as malaria.

Careful examination of the patient ought to discover sepsis by the finding of a definite focus of pus, and in many cases ulcerative endocarditis can be discovered by changes in the heart sounds; and in many more cases a diagnosis of puerperal sepsis can be arrived at by a searching investigation which will reveal a criminal disregard of asepsis upon the part of the attendants.

Typhoid fever can usually be discovered by the history of the prodromes, the state of the tongue, that of the bowels, the rose rash, the characteristic temperature curve, when not modified by antipyretics, and the Widal test of the blood.

Better than all for an absolute diagnosis is the discovery of the malarial parasite in the blood by the use of the microscope. Unfortunately this is only possible to the expert. To a less degree the diagnosis is established by the results of the therapeutic test—that is, the administration of quinine. This test by quinine is of importance, and is recommended if it be impossible to make a microscopical examination of the blood, for under the influence of proper doses of this drug, accompanied or preceded by a calomel purge, no malarial fever will persist more than four or five days.

The diagnosis of the estivo-autumnal malaria presents more difficulty than the tertian or quartan variety. As stated above, this is a much more serious disease and does not evince the same tendency toward self-limitation. Those who suffer from it are notoriously liable to subsequent outbreaks of the disease when for various reasons their vital resistance is impaired or the system affected by change of climate. The disease to be most often differentiated from remittent fever in this latitude is typhoid fever. Typhoid fever not infrequently bears a close resemblance to remittent malaria, and remittent malaria very often develops many symptoms common in typhoid, or in other words gets into a typhoid state. These two diseases may and do coexist, but there is no such disease as typhomalarial fever. No organism

representing a separate disease of this type has ever been discovered, and if every possible means of differential diagnosis, especially the microscope, were used in these border-line cases, they would certainly be classified either as typhoid or malaria and not as typhomalaria.

"The presence of estivo-autumnal fever is determined by the fact that the patient is, or has been, living in a region in which this disease is prevalent, or at least may occur. . . . Again its presence is determined by the discovery of the estivo-autumnal parasite in the blood. . . . After the first week of illness the absence of rose-spots and the Widal reaction will determine the case not to be one of typhoid fever. Finally, good-sized doses of quinine will modify the fever of this type of malaria, but will not affect typhoid fever at all. The physician should make it a rule that if a case of fever does not yield to quinine in four days it is not malaria; provided, however, that by the use of calomel and other measures he has been able to put the alimentary canal in such a state that the quinine can reach the blood" (Hare).

Clinically the persistence of a trace of the paroxysm, the presence of jaundice, the early anemia, herpes or urticaria, and the relative infrequency of Ehrlich's diazo-reaction in the urine, will aid in confirming a diagnosis of malaria.

A consideration of the points in differentiation between the pernicious forms of estivo-autumnal fever and the diseases which they resemble will for want of time have to be omitted.

A more intimate and thorough knowledge of the etiology of this disease has imposed upon us increased responsibility in the recommendation of prophylactic measures. "Although recent researches all tend to prove that infection occurs by other channels than the alimentary tract, notably the skin, it is the part of prudence to sterilize by boiling water coming from infected regions. The prophylactic value of quinine is not to be overlooked, and malaria may often be prevented by taking the drug in doses of five or six grains, or even less, in the twenty-four hours" (Wilson and Ashton).

Accepting it as proven beyond reasonable doubt that the disease is conveyed to humans by the mosquito (anopheles), measures both public and private looking to the destruction of these pests in their larval state are of the greatest importance, and should receive the aid and hearty commendation of the medical profession. The use of wire screens or netting to prevent the entrance of mosquitoes into houses, and of mosquito-bars in

sleeping apartments, is not only to be commended but insisted upon in all regions infested. It ought to be an easy proposition to persuade our friend and patron who insists on living in the river bottom or on the edge of the swamp to invest a few dollars in quinine and mosquito-bars and thereby save himself and his family from their annual visitation of the fever and ague; and incidentally economize in the matter of doctor's fees, drug bills, and loss of time, not to mention escape from sickness, suffering, and death.

Another item in prevention is that the sick man afflicted with malarial disease should be with the strictest care protected from the bite of other mosquitoes, otherwise he simply becomes a depot or distributing center for the malarial poison not only to the remaining members of his family but to the neighborhood.

In the treatment of malarial disease quinine has long been known and accepted as a specific. "But," as stated by Hare, "on the other hand, it must not be forgotten that quinine cannot destroy the malarial parasite until it (the quinine) has entered the blood, that it cannot enter the blood until it is absorbed, and that it is impossible for it to be absorbed if the gastroduodenal and hepatic circulation is so disturbed that catarrh of the stomach and bowels is present, making it impossible for the quinine to be taken up by the circulation. It is therefore essential in almost every case of malarial fever that the bowels shall be thoroughly unloaded, preferably by full doses of calomel, of which not less than five nor usually more than twenty grains are required, this in turn being followed by a saline purge."

Another point in the exhibition of quinine for malaria is that the administration of the drug should be so timed with reference to the malarial paroxysm, or what corresponds to it in the remittent type, that the patient will be cinchonized—that is, that the quinine will be in his blood just at the time of sporulation, for it is upon the young spores that the drug has its best effects.

In the treatment of remittent fever, especially the bilious and other forms characterized by nausea and vomiting, much more difficulty is experienced. When vomiting and irritability of the stomach is so persistent as to prohibit the administration of quinine by the mouth, it should be given hypodermically. Its absorption through the rectum is too slow, and through the skin too unreliable to be depended upon. Hare gives the formula for hypodermic use of quinine as follows: "Dissolve fifteen

grains of hydrochlorate of quinine in fifteen minims of alcohol and two and a half drachms of distilled water. Just before using add a drop or two of dilute hydrochloric acid."

Quinine does not do much good, other than as a bitter tonic, in malarial cachexia or any other of the local or general effects of malaria. In malarial hematuria there is the widest difference of opinion among authorities as to the value of quinine, many contending that quinine will aggravate existing hematuria or even provoke it in kidneys not previously so affected. The weight of opinion, however, seems to be in favor of its use in hematuria occurring in acute malarial infection when no other reason can be assigned for the presence of blood in the urine.

For the after-effects of malaria our best therapeutic measures are arsenic, iron, strychnine, cod-liver oil, and other alterative and reconstructive agents.

A HOSPITAL CAR has, says the *Medical Record,* recently been built by the Southern Pacific Railway. It is 67 feet long, with a breadth of 9 feet 8 inches. Twenty-six feet of the central body of the car is given up to the operating and dressing room and a ward with berths for twelve patients. The rear of the car is built as an observation room, and between it and the hospital proper are staterooms for doctors and nurses. Forward a limited space is given to kitchen, refrigerator, and servants' quarters. Under the car body, stored in pockets reached through trap-doors, is the paraphernalia which goes to make up the twelve berths. Close by is the medical locker room, with closets containing a regular dispensary outfit and sets of surgical instruments.

DR. LOEB'S researches are fascinating to the popular mind; but the scientist must, says an exchange, regard announcements of his work in the light of two or three well-established facts. To stimulate or excite vitality which is latent is not "producing" or "creating" life. The California biologist has worked with eggs, not grains of sand, as an exchange truly observes; and the eggs which he has used are those of sea-urchins and starfish, organisms of a low order in the scale of animal life. No feat which Loeb has yet attempted is comparable with that which nature sometimes performs. The eggs of some insects hatch without fertilization at all. "Parthenogenesis," a phenomenon with which zoölogists are familiar, "is more miraculous than any well attested human achievement."

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

CLIMATE FOR THE AGED.

The early months of the year in the higher latitudes of our country are usually marked by such unfavorable climatic conditions that it is wise to consider what disposition should be made of those who may be fortunate enough to be able to escape from the malign condition which usually prevails. The tubercular, the neurasthenic, and the subjects of senility are the classes which perhaps are most affected by climatic conditions. The former two classes may, however, be fairly well attended to in any climate, but the death-rate in the aged always appears to bear a direct relation to the vileness of the weather, and it may not be amiss at this time to consider what should be done with elderly people who have the ability, though seldom the inclination, to go where they will.

One great difficulty the clinician will encounter will be that of convincing people they are growing old. A man is as old as he feels and a woman as old as she looks are convictions which have so deeply impressed themselves in general conception that it takes no little ingenuity to modify such well accepted beliefs. Old age is not a disease, it is a simple atrophy in which the capillaries wither, so that many of the tissues are ill supplied with blood. We may or may not accept the doctrine of Metchnikoff, but care and age come unawares, and the glands which should manufacture the vital fluids gradually lessen in efficiency until decrepitude in mind and body become dull, dead certainties. A recent writer has decided that what he calls a "relaxing" climate is the most favorable to old age and conducive to the amelioration of the peripheral weakening of the capillaries. He compares a climate of warmth and comfort as resembling in its effects a warm but light overcoat. It clothes the shivering body,

the warm and moist air bathes and soothes the pulmonary mucous membranes and lessens the tendency to bronchial affections, and these after all are among the chief causes of the demise of many whose continued presence is still desired on earth. By keeping the capillaries of the skin in a state of gentle dilatation the work of the kidneys and of the heart is much diminished, and the general comfort and well-being of the body is much augmented.

Fortunately this country is well supplied with suitable climates for elderly people. Warm, relaxing temperatures pervade a large portion of the South. Cuba and Porto Rico are places in which Americans may feel at home. California with her Mediterranean shores will never fail to give comfort and satisfaction to those whose weakened capillaries need the light top-coat of a mild climate. Elderly people, however, are not always docile in their habits and cling to preëstablished convictions with a pertinacity which simulates obstinacy. Their fixed modes of thought render them little liable to persuasion. The difficulty of making people mobile who have become stable in their habit is one which the persuasive reasoner alone can contend with, and he often in vain. The still greater difficulty of infusing into the subject of senile aboulia an adequate measure of will-force is one which can only be left to the individual circumstances of each particular case to resolve.

EDITORIAL NOTES.

Hospital Economy.

The question of hospital economy is one that is of great interest to many practitioners. Dr. Gerster, of New York, in discussing this subject in a recent number of the *Medical Record* first compares the daily cost per patient in different hospitals in this country and Europe, the result showing that in America the outlay is very much greater. These facts serve as arguments in favor of the view that in order to meet successfully the conditions now existing, when the large hospitals usually show an annual deficit, retrenchment is the proper remedy, and not an appeal for greater liberality on the part of the comparatively few philanthropists who furnish most of the funds for the hospitals. In analyzing the conditions which underlie the extravagance and waste in hospital management in this country, the author empha-

sizes the necessity for more active participation in the executive control by the members of the medical staff. The plans of organization of the great hospitals of Hamburg, Berlin, Vienna, and Budapest are described in detail. The essential features are that the position of the lay superintendent is occupied by one or more salaried medical directors, the attending staff is very limited, so that the service is a permanent one with salaried visiting physicians and surgeons, and the house staff also is composed of paid assistants, whose positions are permanent. In this way all those concerned are able to give the necessary time to details of economical management, and also acquire the experience necessary to carry them out with effect. The present plan of conducting hospitals here resembles that in use in medieval Europe, and the author predicts that sooner or later a system similar to that now employed in Europe must be adopted. While opposition to reform in this direction is to be expected, restriction in the number of those who attend at our hospitals is essential to economical improvement, and is urgently required also to effect a betterment in the care of the individual patient.

Asepsis of the Hands.

The question of hand disinfection is one that has, since the advent of aseptic surgery, occupied a large place in the endeavors of operators. Many efforts have been put forth, and to each and every one some objection has been found. Quite recently there appeared in a French medical journal an account of a series of investigations on this subject by two well known pathologists. These investigators have come to the conclusion that absolute asepsis of the hands is never realized no matter how much care is used. They show that mechanical scrubbing with a sterilized brush and hot water in a sterilized basin is the best method. The best antiseptics are hermophenyl 50 per cent, and water oxygenated to 12 volumes; these do not damage the skin, but they require thirty minutes' prolonged application. Contrary to the common opinion, the authors demonstrate that sweat does not infect the hands. When the number of germs is increased after sweating it is due to insufficient cleansing of the hands. Hyperidrosic hands after cleansing attain a higher degree of purity than dry hands, because the latter are more or less squamous, and the squamæ retain the microbes. On hands that are constantly kept clean the microbial flora varies with the nature of the contacts. The more energetic the washing the more is the

bacterial flora simplified, till finally nothing is left but the polymorphous coccus of Cedercrentz, the habitual parasite of the skin.

Food Adulteration.

This journal has on several occasions in the past commented on the baneful effects of various adulterants contained in many of the food products now sold to an unsuspecting public. This year, as in each preceding one for now nearly twenty years, a national pure food bill will be introduced into Congress, and as usual will be fought by the combined interests of the manufacturers whose methods would have to be amended should it become a law. The problem of obtaining pure food is becoming a very serious one, not alone for the poor but for the better classes who have the money to buy pure food, but find it difficult to obtain. Now is the time for every physician in this country to use all the influence at his command to have this bill for pure food made a law. The way to do this is for every doctor in this country to write a personal letter to the senator representing his State and the congressman his district urging them to support the measure. About the only way to impress our national legislators is through some such concerted action on the part of the medical profession. As every other civilized nation in the world protects its citizens against impure food products, it is certainly a sad commentary on us that we cannot do the same.

Street Noises.

Street noises, against which the profession in this country has waged a more or less successful warfare, seem to be at their worst in the large cities of England. The London *Lancet* recently received a letter from a man who had undergone an abdominal operation in Birmingham. He told in his letter of complaint to the mayor that the quarter-hour clanging of the town bells, especially during the night hours, greatly disturbed his rest. The mayor declined to interfere on "the grounds that the clock is a public one, and its consistent working is of first importance to the inhabitants of the city." The *Lancet* in discussing the letter editorially said that the mayor of Birmingham had made a very poor reply to a sick man, and this journal has in consequence started a crusade against such unnecessary street noises as town bells and chimes.

ITEMS AND NOTES.

THE five medical schools of New York will this year take care of about 2148 students.

SINCE January 1, 1905, there have been 60,000 cases of typhoid fever in New York.

ON November 1, 1905, all charitable institutions of the State of Illinois came under the new civil service law.

THE Nobel Prize committee is understood to have decided to award the prize for medicine to Prof. Robert Koch.

THE plague is spreading in the vicinity of Kobé, Japan, and the authorities report that four districts are infected.

THE Lancaster, Pa., General Hospital was dedicated on November 30, 1905. The new building was erected at a cost of $75,000.

THE Minnesota State Examining Board recently granted a license to twenty-five candidates to practice medicine and surgery in that State.

THE Board of Health of Los Angeles, it is reported, has commenced a crusade against patent medicines which contain poisons or alcohol.

NORWAY, it is claimed, forbids the newspapers to publish advertisements or in any other way to further the sale of any and all patent medicines.

THERE have been twenty-two deaths from tetanus in St. Louis within the last six months. Thirteen of these were cases of tetanus neonatorum.

THE New York City police officials have decided to introduce the thumb imprint system of identification into the methods of the police department.

A MONUMENT in memory of the late Dr. Alexander J. C. Skene is now in process of erection on the triangular plot at the north of the Prospect Park Plaza, Brooklyn.

The Mississippi State Board of Health has just completed the annual register of practicing physicians of that State.

A chair of therapeutics has recently been established in the University of Paris through the liberality of the Duc de Lubat. Dr. Albert Robin will be the first incumbent.

In order to meet the ever-increasing expenditure for the army and navy, the German government proposes to levy heavy additional taxes on beer, tobacco, cigarettes, and cigarette paper.

The Homeopathic Medical Society of the State of New York held its semiannual meeting at Syracuse September 26 and 27, 1905, under the presidency of Dr. De Witt G. Wilcox, of Buffalo.

Wood alcohol, states *Medical Summary,* is always and everywhere dangerous; and there is no warrant for its use or sale for purposes other than as fuel. The harm it works is generally irremediable.

Prof. Albert Ladenburg, of Breslau, to whom the Royal Society recently awarded the Davy prize for his researches in the domain of organic chemistry, has had to undergo amputation of the right leg.

A bill is to be introduced this winter into the Massachusetts State legislature "to prohobit all experiments under any circumstances and for any purpose whatever, with or without an anesthetic, upon dogs or cats."

Dr. Rene du Bois-Reymond, a son of the great physiologist, has been appointed principal of the Special Physiological Department of the Berlin University Physiological Institute in succession to the late Prof. Paul Schultz.

According to the *Novosti,* the course of lessons in English and French organized some years ago for the Russian medical students will be continued. The professor, M. Mayar de Belmar, is paid partly by the academy and partly by the students attending the language classes.

A prize of the value of 15,000 francs, which is awarded in recognition of "les plus beaux, les plus grands devouements de quelque genre qu'ils soient," has just been conferred by the Academy of Moral and Political Sciences on M. Calmette, director of the Pasteur Institute of Lille.

It has been reported, says a contemporary, that the State Board of Medical Examiners of Wisconsin declare that the Harvey Medical College of Chicago is not a reputable institution, and it is doubtful whether its diploma will be recognized in Wisconsin under the reciprocal system now in force.

It is announced that all first-class passengers landing at American ports are in future to be subjected to a medical examination as rigorous as is enforced in the case of steerage passengers. Up to the present the first-class passengers have escaped the medical inspector, who has accepted the statement of the ship's doctor as to their health.

The New York Renovesical Society was organized on November 22, 1905, for the study of the diseases of the bladder and kidneys. The officers of the society are as follows: President, Dr. Ramon Guiteras; vice-president, Dr. Winfield Ayres; secretary, Dr. Robert H. Hollister. Membership is limited to fifty. Meetings are to be held monthly.

A statistical report recently presented to the German Imperial Chancellor is said to show that the birth-rate of Germany is receding rapidly, at any rate in the towns. In 1904 the birth-rate was 30.5 per 1000 inhabitants, against 30.9 in 1903, 32.1 in 1902, 33.4 in 1901, and 33.7 in 1900. The decrease, therefore, is continuous, and has begun to cause anxiety.

A Nothnagel scholarship of $5000 is announced to be established in memory of the late professor. The yearly income will be awarded as a prize for the best medical essay on such medical problems as may be proposed by the Senate of the University of Vienna. Should no essay be satisfactory the money is to be expended to encourage research on diseases of the intestines.

A notice has been hung up in the Military Medical Academy, St. Petersburg, to the effect that unless all efforts are abandoned to make the academy a center of political action the committee will be obliged with regret to close the establishment. The notice appeals to the students to have sufficient reverence for the cause of education and the honor of the academy to make such a course uncalled for.

Dr. Edmond Souchon, president, and all the members of the Louisiana State Board of Health have resigned in a body,

says the *New York Medical Journal*. This action, it is alleged, was precipitated by a persistent intimation of the governor that he wanted an investigation as to how yellow fever got into Louisiana and who was responsible, and by his last action of calling upon the grand jury of Orleans parish to investigate.

At the annual meeting of the National Association for the Study of Epilepsy, held in New York on November 29, 1905, Dr. Spratling announced that the association offered a prize of $300 for the best essay on the etiology of epilepsy. Physicians in any country may compete. The award will be made in November, 1906, but all essays submitted must be sent in by September. Details as to conditions governing the award may be obtained from Dr. Spratling, Sonyea, N. Y.

On November 21, 1905, the Société Medico-Chirurgicale de Paris celebrated the hundredth anniversary of its birth. Professor Debove, dean of the Faculty of Medicine, presided at the ceremony, being assisted by Dr. Huchard, honorary president, and Dr. Desnos, president of the society. Addresses were delivered by Drs. Desnos, Huchard, and Roche. In the evening the members of the society dined together, the Minister of Public Instruction, M. Bienvenu, being in the chair.

The Tri-State Medical Association of Arkansas, Mississippi, and Tennessee held its twenty-second annual meeting at Memphis on November 21, 22, and 23, 1905. Officers for the ensuing year were elected as follows: President, Dr. Allen E. Cox, of Helena, Ark.; vice-presidents—Arkansas, Dr. Dickson, of Paragould; Mississippi, Dr. E. J. Johnson, of Yazoo City; Tennessee, Dr. F. J. Runyan, of Clarksville; secretary, Dr. Richmond McKinney, of Memphis; treasurer, Dr. Marcus Haase, of Memphis.

The Illinois Commissioners of Public Charities, in their quarterly report, ended September 30, 1905, gave, says an exchange, the following as the per capita cost of the various State institutions: Illinois Western Hospital for the Insane, $26.21; Illinois Eastern Hospital for the Insane, $30.05; Illinois Hospital for the Incurable Insane, $30.32; Illinois Central Hospital for the Insane, $31.27; Illinois Southern Hospital for the Insane, $35.13; Illinois and Northern Hospital for the Insane, $31.67; and Illinois Asylum for Insane Criminals, $50.43.

NEW PUBLICATIONS.

AUTOINTOXICATION IN DISEASES.

Bouchard's lectures on Autointoxication in Diseases rank as a medical classic. In their new and revised form they still exercise over the reader the fascination which was so characteristic a feature of the first edition. It is useless to state that in the light of modern progress there is a considerable difference between this and the former edition, the changing aspect of the fundamental physiological problems upon which it is based necessitating the restatement of much of the subject-matter. The relation of Bouchard's ideas to the modern problems of immunity will be found full of interest. Bouchard's work is one of great suggestiveness, and its value to the medical profession is as great now as it ever was.

Lectures on Autointoxication in Diseases or Self-Poisoning of the Individual. By Ch. Bouchard. Translated with a preface and new chapters added by Thomas Oliver, M.A., M.D., F.R.C.P. Second Edition. Philadelphia: F. A. Davis Co., Publishers, 1906.

TEXT-BOOK OF ANATOMY.

Cunningham's Anatomy is a splendid memorandum of anatomical zeal and industry. The text is as interesting as such a subject can be made. The drawings and illustrations are of the very highest type, and the work as a whole is a very valuable and readable text-book of anatomy.

Text-book of Anatomy. Edited by D. J. Cunningham, F.R.S. Second and Thoroughly Revised Edition. Illustrated with 936 wood engravings from original drawings, many printed in colors. New York: William Wood & Co.

LABORATORY MANUAL OF PHYSIOLOGY.

This is an outline of experimental physiology for the guidance of students. It is brief and concise in form, and the experiments selected have been presented with a view of meeting the needs of the medical student with a view to illustrating important medical problems. The work is one which will prove of great value to those for whom it is designed.

Laboratory Manual of Physiology. By Frederick C. Busch, B.S., M.D. Illustrated. New York: William Wood & Co.

THE BLUES.

The second edition of Dr. Abrams's book of the Blues justifies the esteem in which it is held by the profession. The author attempts to prove that what he calls "the blues" is the subjective equivalent of splanchnic neurasthenia. The book is a very readable one and is not without real scientific merit.

The Blues: Causes and Cure. By Albert Abrams, A.M., M.D. (Heidelberg), F.R.M.S. Illustrated. Second Edition, Enlarged. New York: E. B. Treat & Co., 1905.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Treatment of Joint Stiffness by Means of Gradual Rectification Combined with Massage.

G. Nostrom (*Medical Record,* Nov. 4, 1905) describes the application of massage as a means of facilitating the reduction of joint stiffness by manipulation. Stiffness of joints he says may be caused in three ways: by traumatism, by rheumatism and gout, or by chronic inflammation due to tuberculosis. Cases of traumatic ankylosis are readily amenable to treatment, though difficult cases occur in which the false ankylosis has followed periarticular fractures. Those of the olecranon are especially serious, as the mobility of the joint may be entirely destroyed by exuberant callus, which it is impossible to remove. The author does not believe that in practical work true ankylosis ever follows immobilization, though joint stiffness may be observed. False ankylosis of rheumatic origin presents numerous varieties. They are all the more obstinate if the process is an old one and if the attacks have been frequent. These are, however, not unfavorable cases for treatment. When there are no synechiæ or productions of new connective tissue, and the pathological changes are entirely confined to the periarticular fibrous tissue, the tendons, and the fleshy parts of the muscles, rectification combined with massage gives results that could not be obtained either by forced extension or by forced flexion alone. In false ankylosis, due to gout or following hyperplastic granular synovitis, the condition is not favorable for treatment. In tuberculous lesions interference is not contraindicated if there is reason to suppose that the bacilli have disappeared. Concerning the actual procedure the author says that massage is used in various ways, both before and after rectification. Employed in the first case for some time it softens the tissues, diminishes their tension and resistance, and gives them a certain flexibility; consequently it facilitates the maneuver employed. After extension or flexion massage in the shape of effleurage is performed for about ten minutes. Massage will then favor the absorption and not fail to remove the little swelling often produced through the manipulations. Besides, it is of real service in secondary atrophies. No procedure is better to stimulate or

to regulate the nutrition of the muscles. The remainder of the article is occupied with a detailed description of the measures to be employed in dealing with the different joints.

Penetrating Wounds of the Abdomen.

Randolph Winslow (*Journal of the American Medical Association,* Oct. 7, 1905) discusses abdominal wounds and gives a lengthy summary of cases treated at the University Hospital, Baltimore. He remarks on the occasional indefiniteness of the symptoms, and insists on the importance of early laparotomy, in a well-equipped hospital if possible. The apparent exception afforded by military experience as to the propriety of prompt operation and in the prognosis of these injuries is noted and accounted for by the special character of the modern military projectile causing a lesser mortality among patients not operated on, and in the greater danger of increasing the risk of infection in operation. These conditions do not exist in civil practice, and there the earlier the operation the better. Shock, being usually due to hemorrhage, is not a contraindication; laparotomy should be done at once and the bleeding vessels secured. He insists on the importance of a thorough search in all parts of the intestinal tube, as perforations are liable to be overlooked. Wounds of the stomach and of the solid organs and their special characteristics are noted. Among the cases reported one is of interest on account of the fact that the aorta was pierced by a 32-caliber bullet, making a slit in its anterior surface and an everted counter-opening behind, the bullet then lodging in the third lumbar vertebra. These were the conditions found on autopsy, the patient having lived 122 hours after the injury.

Spontaneous Restoration of Bone Removed in Craniectomy.

At a recent meeting of the Medical Society of Paris M. Barbaux (*Lancet,* Nov. 25, 1905) described an unusual occurrence which he and M. Marie had jointly investigated. The patient was a male idiot who had been under their observation for a long time, and on whom craniectomy had been performed at the age of eleven years. He died from tuberculosis enteritis ten years afterward, and at the necropsy it was found that spontaneous restoration (refection) of the resected portion of bone

had taken place and was almost complete. There might have been some improvement in the patient's mental condition, but not for more than a very brief period, and his dementia appeared to have been reëstablished long before the restoration of the bone. The new formation seemed to have proceeded in the same manner as the normal ossification of the skull, for a sort of fontanel was gradually occupied by bony spicules arising from the normal temporal and frontal points of ossification of the parietal bone and converging toward the sutures. These bony spicules formed in the interosseous membrane a pattern like that of the feuille de figuier (the French name for the internal grooving of the parietal bone). M. Barbaux and M. Marie drew particular attention to the circumstance that the restoration of the bone was almost complete, although some very competent authorities had maintained that the periosteum of the cranial bones had no osteogenic properties and that spontaneous restoration of these bones was impossible.

In the opinion of M. Barbaux and M. Marie this case, while showing the inutility of surgical interference in certain forms of idiocy, proved that the periosteum of the cranial bones possessed osteogenic properties when it was left intact after an operation performed with aseptic precautions before the period of adult life.

Operative Treatment of Cleft Palate.

John De Vinne Singley (*American Medicine,* Sept. 16, 1905) states that the results in the operative treatment of cleft palate are almost certain to be good if accurate approximation can be secured and maintained without tension. Three to five months before operation a dentist places in the three upper posterior molars a small metal clamp the two sides of which can be gradually approximated by a screw and nut, thus diminishing the width of the cleft. The clamp is removed a few days before operation. The edges of the cleft are split laterally, using a small knife with a flexible copper shank, thus securing broader surfaces for union. The relaxation incisions on either side are kept packed with strips of iodoform gauze, preventing contraction during healing of these incisions with pulling on the suture line. A marked Trendelenburg posture is used, with the head of the patient just above the knees of the operator. Proper postoperative treatment ranks next in importance to approximation without tension. This comprises absolute starvation for two or

three days with nutritive enemas, absolute prohibition of talking, and frequent irrigation of the parts with a mild antiseptic solution. The gauze packing is removed and replaced daily.

Venesection.

Bruner (*Zeitschrift f. klin. Med.*, Bd. 53) finds that the most important effect of venesection is to relieve the circulation and to allow the heart to exercise its reserve energy. If the heart muscle is greatly degenerated bleeding is useless, or else the benefit is only temporary. Bleeding in pneumonia, especially when cyanosis and dyspnea are present, as well as in chronic cardiac and pulmonary disease, is usually followed by good results. The suggestion of the treatment of chlorosis by bleeding does not meet with the writer's approval, as rest and iron will usually bring about the desired result, and if such treatment fails there is usually some other malady besides the chlorosis to contend with.

MEDICINE.

Regeneration of Nerves.

Matt Halliburton and Edwards (*Journal of Nervous and Mental Diseases,* October, 1905) have followed their studies in nerve degeneration with others in nerve regeneration. Early in the degeneration of the nerve fibers the nurilemma cells multiply, and later seem to assist the phagocytes in the removal of the broken-up myelin drops. The neurilemma cells are found in elongated strands concealing the newly formed axis cylinder. The authors conclude that this cylinder proceeds alone from the central end of the divided nerve, and that the peripheral cells simply act as a scaffolding for it. They call attention to the fact that histological evidence is not sufficient to establish the identity of a nerve fiber; that a strand which looks like one is not really such unless capable of responding to excitation and conducting nerve impulses. The peripheral theory of nerve regeneration has been held to be supported by clinical evidence, on the ground that after freshening up and suturing a divided nerve sensation returns within forty-eight hours. A case is noted, however, in which the patient stated shortly after the operation that he was able to feel, but these sensations disappeared again in a short time, and feeling did not really return for several

months. It is suggested that the stimulation of the "freshening" lasted for several hours, the sensation being referred by the patient to the original terminals of the fibers.

In certain of the experiments nerves were cut, and the upper end covered with a cap so as to prevent the peripheral end from uniting with the central. After 100 or 150 days electrical stimulus found no response under anesthesia even to strong faradic currents, and the microscope discovered no trace of regeneration. Another significant experiment consisted in dividing and then suturing together a large nerve in monkeys and cats. Upon exposing this nerve after function had been restored it was found united and excitable both above and below the union. A piece of nerve removed an inch below the point of original division was found to consist of fine new fibers with no trace of degenerated products. After ten days the animal was killed, and the peripheral portion of the nerve both above and below the second incision was found quite unexcitable and exhibiting Wallerian degeneration. The authors have concluded from some evidence which they offer that the new fibers are less perfectly developed farther from the original point of section.

Typhoid Perforation.

W. Courtney (*Journal of the American Medical Association*, December, 1905) remarks on the promptness with which the profession meets the surgical needs in appendicitis as contrasted with its apparent neglect of the equally urgent need of operation in typhoid perforation. The difference is one of the anomalies of surgical progress. In the fifteen years from 1898 to 1905 there were treated in the Northern Pacific Railway Hospital at Brainerd, Minn., 576 cases of typhoid fever, with 42 deaths, or 7.3 per cent. Ten deaths, or 28.8 per cent of the total mortality, were from perforation. All the patients not operated on died, as well as four or five subjected to operation, making a recovery of 20 per cent. The pathology and symptoms of intestinal ulceration and perforation in typhoid are reviewed and the symptoms described. He says: "Given a case of typhoid fever with clinical symptoms pathognomonic of the disease, backed by Widal's sero-diagnosis, if possible, and presenting after the first week the three cardinal symptoms, pain, rigidity, and tenderness in the cecal region, supplemented by some of the less valuable symptoms, and it will be not only expedient but reasonable to diagnose intestinal perforation."

As regards the differential diagnosis, Courtney holds that, with the possible exception of intestinal hemorrhage, operation is equally indicated in all the conditions that are likely to be confounded with typhoid perforation. With the improvement in the treatment of peritonitis, the expectation of 50 per cent of recoveries, if the operation is undertaken within the first three hours, ought to be realized. He prefers general anesthesia in these cases, and the incision through the right rectus muscle opposite the cecal region. He would use drainage from the bottom of the pelvis, probably through a stab wound on the left, as well as by the operation wound, and put the patient in the Fowler position to favor gravitation of fluids to the pelvis where the drainage has been placed. The sutured portion of the intestine should be fastened by gauze or a few stitches of ten-day catgut to the operation wound, as a precaution in case of giving way or leakage from the suturing. Except when used for drainage the operation wound may be closed by through-and-through sutures.

Detailed reports of the eleven cases of perforation are given. The author remarks in connection with the site of the perforation that he has seen in consultation two cases of esophageal stricture developing before convalescence in typhoid, in neither of which could it be attributed to any traumatism occurring in the course of the disease.

Blood Cultures from Typhoid.

R. Duffy (*Journal of the American Medical Association,* Nov. 18, 1905) believes from his observations that blood cultures afford a surer and earlier diagnosis of typhoid than the Widal reaction and are perfectly feasible in family practice. In his 88 cases the Widal test was positive in all but two, and in 18 the blood cultures showed bacilli before the Widal test. The cases were not selected, but were taken as they came. Eleven were fatal. The blood was taken from the arm veins and cultivated in bouillon (1/50th dilution) in the incubator for forty-eight hours. In a few cases positive results were obtained only at the end of four days. In 36 cases in which the temperature was above 102° the bacilli were present in the blood in every case, and in 23 cases in which the temperature was 100° or 101° F. the bacilli were cultivated from the blood in 10 cases, or 43 per cent. Other organisms than the typhoid bacillus were found in the cultures after the second week with the temperature 103° or over, but none before.

His conclusions are given as follows: "(1) Bacillus typhosus is present in the blood in all cases of typhoid fever in the second and third weeks, when the temperature is 102° or over. (2) Bacilli of the enteric group of bacteria (*Bacillus alcaligenes*) are present in a considerable percentage of the cases after the second week, at first accompanying bacillus typhosus, then supplanting it. (3) Later in the disease cocci may be present in the blood. (4) Bacillus coli communis is never present in the blood of typhoid patients." In the cases in which the typhoid bacillus was isolated no control cultures were made to exclude the possibility of air contamination.

Poison in Eggs.

At a late meeting of the Paris Academy of Sciences G. Loisel (*Lancet,* Nov. 25, 1905) related some experiments which he had made concerning the poisonous action of the yolk of egg. The yolks of the eggs of hens, ducks, and tortoises contain a substance which when injected into the veins, under the skin, or into the general body cavity causes death sooner or later, from an acute intoxication of the central nervous system. If the yolk of a duck's egg be dried, powdered, and then treated with saline solution so as to make a one-per-cent solution, and this fluid is injected into the veins of a rabbit, the rabbit will die if the dose be from seven to eight grammes per kilogramme of body weight. From 20 to 30 grammes per kilogramme are, however, required if the injection be made into the cœlom. Hen's egg yolk is less toxic than that of the duck, but that of the tortoise is more poisonous than either, for in this case from five to six grammes per kilogramme will kill a rabbit even when injected into the cœlom. Egg albumen is equally toxic, at least, in the case of the tortoise, which is the only egg albumen with which M. Loisel has experimented so far.

The Passage of Bacteria Through the Intestinal Wall.

T. Ruidore (*Rif. Med.,* October, 1905) has from his experiments on dogs drawn the following conclusions: (1) Bacteria cannot pass from the intestinal lumen to the peritoneal cavity unless the wall of the intestines is either necrotic or considerably disorganized; (2) the bacteria pass through more freely when this necrosis is due to strangulation of the gut than when it is the result of mechanical or chemical injury; (3) they cannot

pass through the wall when either the serous or the muscular coat alone is destroyed. But he finds that grave lesions of the mucous coat enable bacteria to reach either the mesenteric glands or the circulating blood.

Blood Differentiation.

Uhlenhuth (*Deutsche med. Wochenschrift,* 42, 1905) points out that the biologic precipitin test is the most delicate one at our disposal to employ in differentiating the blood of different animals. He also calls attention to the fact that confusing results may occur amongst animals closely allied, as man and monkey. To overcome this source of error he advises the injecting of monkeys with human blood, when a precipitin will be obtained which is absolutely specific for human blood, and will not give any reaction with monkey's blood; in the same manner a specific precipitin may be prepared for hare's blood by injecting rabbits with it.

THERAPEUTICS.

The Treatment and Care of Advanced Cases of Pulmonary Tuberculosis.

S. A. Knapp (*Medical Record,* Nov. 18, 1905) regards as advanced those cases of pulmonary tuberculosis that can no longer be classified as incipient or early. The advanced cases are divided into ambulant and bed cases. The former are those who are most of the time without fever, and in whom the systemic disturbances are only a little more aggravated than in the early stage. These may be treated as incipient, with the one exception that if there is not a satisfactory gain in weight they should be put at rest in bed or on the reclining chair, constantly exposed to the open air. The ambulant patients are the most frequent sources of infection, and the greatest care must be taken to train them to dispose of their sputum properly. Several plans for accomplishing this are described. The bed cases are subdivided into four classes, namely, sanatorium patinets, hospital patients, home patients—well-to-do, living in either cities or country—and the consumptive poor, living in villages or in city tenements. It is a matter of great difficulty to find proper accommodations for such patients, as sanatoria are usually unwilling to receive cases that do not offer a favorable prognosis.

The author outlines the essentials for the institutional treatment of such patients, and then describes a great number of plans for applying the fresh-air principle in home treatment. One of the most serviceable of these, especially in dealing with the poor in cities, is a device invented by the author, and known as the window tent. The patient lies on a cot with his head beside the open window, to which is attached a sort of internal awning. This is arranged so that it shuts off the patient's head from the interior of the room, and permits the latter to be kept warm, while the effect is the same as if the patient were entirely out-of-doors. The plan has many advantages both from the practical and from the medical standpoint. Other devices that are commended are Dr. Bull's aerarium and Dr. Kellogg's porte d'air. These are intended to serve the same purpose of permitting the patient to remain indoors, while at the same time he is enabled to receive fresh air as freely as if he were not in the house.

The closing portion of the long and profusely illustrated paper is devoted to a consideration of the other hygienic and medicinal factors that must enter into the treatment, and many practical points are discussed, for which reference must be made to the original.

Scientific Classification of the Methods of Modifying Cow's Milk for Infant Feeding.

G. R. Pisek (*Medical Record*, Sept. 9, 1905) classifies the principles involved in the methods of feeding now in vogue, so as to show the effect of the use of these methods. Infants develop new functions during the suckling period, and change in form and function until the weaning period, after which growth is principally in size. The teeth in the child are absent, and the stomach is not like that of an adult. The digestive tract is developing and changing in functions, yet the milk remains practically the same in composition throughout lactation. Hence the stomach as it develops changes the milk so as to make it suitable for its altered form and function. The digestive secretions change the milk, producing curds, and so supplying the solid constituents that are necessary to accustom the stomach to digestion of solids. A large factor in feeding is the gradual changing of diet. The proteids of colostrum are soluble. This is gradually displaced by proteids in the form of casein combined with calcium, which forms curds. The first secretion of the stomach is rennet ferment, which produces paracasein, a compound

unaffected by pepsin. A small amount of acid secreted will produce free paracasein curd, which is digestible by pepsin. This is denser than the curd produced by rennet. More acid causes the free paracasein to combine with the acid and form chloride of paracasein, digestible by pepsin. Thus the stomach may produce three solid compounds with casein of milk, having different forms and digestive properties depending on the strength of the secretions.

The author divides the methods of infant feeding into seven groups. The first group contains all methods that affect the quantitative composition of milk—dilution with water, fat and sugar addition, and whey and cream mixtures. To insure proper growth and development the infant needs as much tissue and energy foods as are found in human milk. The energy foods in cow's milk are in the same quantities as in human milk, but the tissue foods are in larger amounts. To reduce the quantity of proteids the milk is diluted, and to bring the energy and fat foods up to normal, sugar and fat must be added, otherwise the proteid must supply the energy.

Hydrotherapy of Pneumonia.

Sadger (*Wiener klin. Med.*, 40, 1905) objects to the expectant or symptomatic treatment of pneumonia, and states that owing to the experiences of Pressnitz and Niemeyers we possess in hydriatic therapy a remedy which copes with the disease in the first stage, and in advanced cases hastens the crisis. He recommends moist compresses, a sitz bath of 16° to 20° C., whilst the patient is constantly rubbed. If collapse and cerebral symptoms complicate cold water is applied to the head and neck. The sitz bath not only acts as an antipyretic but also as a diaphoretic.

Value of Chloretone and Sulphonal in the Treatment of Insomnia.

J. S. Christison (*American Medicine*, Dec. 2, 1905) says chloretone appears to possess a special affinity for the brain. In doses of 2 to 3.23 grammes (30 to 50 grains) it usually induces sleep within thirty minutes which lasts from five to eight hours. Its best results are obtained in the insomnia of the agitated, melancholia, epilepsy, neurasthenia, and maniacal attacks with motor excitement. As much as 7.78 grammes (120 grains)

have been taken within twenty-four hours and followed by recovery. Sulphonal is usually prompt and effective in nervous insomnia when given in doses of 1.3 to 2.6 grammes (20 to 40 grains) in solution. It is generally considered a safe hypnotic while the bowels are kept free by aperients and the kidneys continue to act in a normal way; 3½ ounces has been taken at one dose and followed by recovery.

GYNECOLOGY AND OBSTETRICS.

Vesicular Molar Pregnancy Taken for Ovarian Cyst.

A remarkable error of diagnosis is reported by B. Schroder (*British Medical Journal,* Nov. 18, 1905). A woman aged forty-nine noticed sudden enlargement of the abdomen. She had borne eight children; all the pregnancies were normal. The period seemed to be regular; it occurred a fortnight before the swelling began, and was followed within a week by slight hemorrhage. The swelling was examined two weeks after it was first noted; it was tense and movable and extended upward to the umbilicus. It could not be defined as entirely separate from the uterus, but appeared to dip into Douglas's pouch behind that organ. The cervix lay high just behind the symphysis. Malignant ovarian tumor adherent to the uterus was diagnosed. When the abdomen was opened it became clear that the tumor was a uterus enlarged up to the standard of the fifth month of pregnancy; it was abnormally soft and vascular. No fetus could be defined through its walls. Supravaginal amputation was performed. Then the cause of the error became clear; there was a distinct pouching of the uterine walls fitting into Douglas's pouch. The uterine cavity was occupied by a vesicular mole which was invading the walls in the usual manner. The right ovary was in a complete state of atrophy, the left contained a few cysts, but they had not yet been examined microscopically in order to determine if they were of corpus luteum origin.

Chorion-epithelioma and its Spontaneous Cure.

A. Fleischmann (*British Gynecological Journal,* November, 1905), who published a case of chorion-epithelioma some time ago, reports that the woman, who in the meantime has had a normal pregnancy, now two and three-quarter years after the scraping out of the uterus, remains quite well. He does not

consider that the cures in the cases hitherto reported can be attributed to the complete removal of all morbid matter by the curette, and points out that no histological distinction has up to the present been established between the cases that take a benignant course and those that are malignant.

Pyosalpinx Mistaken for Movable Kidney.

D. Hantke (*Centralbl. für Gynäk.,* No. 32, 1905) recently reported the case of a patient who had a tumor entirely abdominal and so freely movable that it could be pushed up as high as the ribs. Movable kidney was diagnosed. At the operation it was found that the tumor was a pyosalpinx closely connected with the great omentum, and drawn entirely above the pelvic brim; indeed, there were no pelvic adhesions.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Cosmetic Treatment of the Skin.

A. Kromayer (*British Medical Journal,* Nov. 18, 1905) considers that since the practitioner has not regarded the cosmetic care of the skin as coming into the scope of his treatment, lay persons and quacks have seized this field; but the whole subject depends on scientific knowledge, and he is attempting to save it from the stigma of charlatanism. The object of the cosmetic care of the skin is to make the skin beautiful and to keep it so. The characteristics of a beautiful skin are: (1) The skin must be smooth, soft, pliable, and of a dull gloss; (2) the color must be a dull white or yellowish-brown; (3) impurities of the skin, such as anomalies of pigment, growths, anomalies of the sebaceous glands, abnormal growth of hair, should be absent. The character of the normal skin as given under the first head depends on the formation of a normal horny layer of the epidermis. This is normally a thin, transparent, elastic, and very resistant membrane, and contains both water and fat. The character is altered if its water or fat contents are altered, the elasticity and pliability disappears, and the horny epithelial cells being cast off the skin assumes a rough, hard texture. In order to retain the normal characteristics of the skin, one should wash as little as

possible in water and soap. For the purpose of cleaning, a mixture of fat and water is best, and milk can be taken as a type of such a mixture. Certain fatty seeds yield a similar decoction which can be used—for example, almond oatmeal. Oils and creams or yolk of eggs are capable of cleaning dirty skin. Kromayer points out that in order to keep the skin well it should be protected from rough stimuli, but that one must naturally vary the method and rigor of the treatment according to the patient. Dealing with the use of powder, he refuses the idea that this does harm by blocking up the pores, but inasmuch as it produces a layer of material which excludes air and light, the habitual use cannot be recommended. Soft massaging with fats keeps the skin soft and elastic. No drugs should be added to the fat.

Dealing with the second point, the author points out that the color of the normal skin depends on the transparency of the epidermis and cutis and on the fat contents of the subcutaneous tissue. Since the nature of the subcutaneous tissue must depend on the general body condition, the color of the skin must in some degree depend on the general good health. Red cheeks are produced by exposure to light, air, and changes of temperature, but this implies a good skin circulation. Redness elsewhere on the face (nose or forehead) is regarded as abnormal and disfiguring. Here one must distinguish between hyperemia and venosity. The former can be dealt with by local applications, such as sulphur preparations (ichthyol, thiol, thiogemin, etc.), while the latter can only be dealt with surgically.

The third condition for a normal skin, the absence of the impurities, requires more energetic measures to attain. The anomalies of pigment are represented as a type by freckles. Growths which commonly spoil the complexion are pigmented and unpigmented nevi, warts, and the like. All these can be dealt with surgically, either by the knife, scissors, actual cautery, or electrolysis. Kromayer has introduced a method of removing these defects without leaving a visible scar. This method is produced by using a rotating cylindrical knife of small size, the exact pattern varying according to the nature of the anomaly of the skin. The same means are of use for anomalies of the sebaceous glands and for superfluous hairs. He deals fully with these rotating knives, which he calls "punches." He claims for the method that the small cylindrical piece of skin which is punched out produces so small a defect that there is practically no wound within a few hours of the operation, and that the scar is so small later that it escapes observation.

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ORIGINAL CONTRIBUTIONS.

SANATORIUM TREATMENT OF TUBERCULOSIS IN COLORADO.[1]

BY G. W. HOLDEN, M.D., DENVER, COLORADO.

The tubercular patient of to-day, upon discovering that he has the disease, and in the light of present knowledge, immediately casts about for the surest and safest road to recovery. He not only demands of his physician assistance for the present symptoms, but looks to him to map out a campaign that must necessarily cover a period of months, if not years, the length of time depending upon the amount of involvement and the stage of the disease.

The future of every tubercular patient is more or less in the hands of his medical adviser, and is influenced by the ability of the latter to make an early diagnosis, providing, of course, that he has the opportunity of so doing, for I recognize the fact that a patient rarely thinks of consulting a physician at the onset of the disease, unless alarming symptoms are present.

In a certain percentage of incipient cases tuberculosis is a curable disease, and can be cured in any climate, but a much larger percentage of cases can be cured under the more favorable climatic conditions.

The profession is awakening to the realization that an early diagnosis can be arrived at only by painstaking investigation and reëxaminations, and to quote from the circular recently issued by the Illinois State Board of Health (which, by the way, is a very serviceable guide to early diagnosis): "Every suspected case should be treated as a suspected case and examined accordingly. More cases of tuberculosis are overlooked for want of examination than for lack of knowledge on the part of the physician."[2]

[1]Read before the Chicago Medical Society, Nov. 29, 1905.
[2]Early Diagnosis of Tuberculosis.

This means that all clothing above the waist should be removed, and a thorough physical examination made. Too often the condition of the bases of the lungs is entirely overlooked. A full and accurate knowledge of the extent of the disease has a most important bearing upon our prognosis, and upon our advice to the patient. Statistics show that one-tenth of all deaths in the United States are due to tuberculosis; in the large cities its bearing upon our practice becomes evident. The procedure I wish to advise, to most strongly and earnestly urge upon the profession, is neither too radical nor unwarranted by the conditions that confront us. In every case coming under our professional care, between the ages of fifteen and fifty, the possibility of tuberculosis should be carefully considered, and most carefully eliminated from the problem. It is only in this way that the many early cases of tuberculosis can be recognized when they should be—in their incipiency. It is only in this way that we can discharge our full duty to our patients, to their lasting welfare, and to our own credit as careful and conscientious physicians.

After having made an examination of my patients and having acquainted them, even in very conservative terms, of the extent of their disease, it is startling to note the number who express regret that an earlier diagnosis had not been made. Also many of these patients express surprise at being requested to remove their clothing to the waist, and volunteer the information that in previous examinations it was not considered necessary. To us it cannot but be evident that the family physician, while perfectly capable of making a thorough examination, has carelessly satisfied his patient of the absence of tuberculosis by a superficial examination. The patient is also not unaware of this fact.

I am inclined to dwell upon this subject of early diagnosis, for its importance is far-reaching. I am satisfied that the general opinion of the profession, much more that of the laity, as to the curability of advanced tuberculosis is erroneous. It is only the early cases which, with the present knowledge of treatment, can be positively cured; to the advanced cases we cannot promise more than an arrest, which under proper conditions may extend over a period of some years.

When a correct early diagnosis has been made, there are certain considerations which are vital, and which must be fully considered by the medical man in planning the campaign for the patient.

The first and most important factor to be considered is the

patient's financial condition, as upon this rests largely his chance of recovery, in the majority of cases. However, it is not wise to give the patient the idea that his poverty stands in the way of his recovery, for it is bound to cause a deplorable state of mind. It is for the physician to exercise good judgment in this particular. Without funds the patient must, of necessity, remain at home, in the most favorable surroundings obtainable under the circumstances, entirely dependent upon his relatives and friends, or else he exhausts the limited funds furnished him by interested friends, churches, or fraternal organizations in transportation to some far distant health resort. Colorado sees many pitiful examples of such misguided charity toward unfortunates, who are in consequence stranded hundreds of miles from home and friends, too ill to work, and who eventually become county or State charges.

On the other hand, if the patient has funds it is the first duty of the physician to see that he is at once removed from his present environment, as such a change alone will prove beneficial to the majority.

Then arises the question, Where can he best be placed? It should be taken into consideration that the average man feels that he cannot be spared from his home or business for any great length of time, and therefore he must consider the health resort most favorable to the rapid arrest of his particular case. This is the opportunity for the physician to impress upon his patient the necessity of arranging his business and of taking a vacation of sufficient length to bring about this arrest. If the physician entices him from home under the delusion that a speedy recovery can be brought about in a month or two, he not only loses the confidence and patronage of his patient, but jeopardizes the latter's recovery.

In advising the patient where to go, the physician has at his disposal unlimited literature descriptive of hundreds of resorts. What the patient requires is an all-the-year-round climate. This, of course, opens up a wide field for discussion, but I am convinced that Colorado possesses and offers to the average patient coming from an unfavorable climate the most desirable features for a residence, for such time as is required to bring about a cure or an arrest of his disease. Although our climate, as described by Dr. Gardner, "is as varied in many of its aspects as the surface of the State itself,"[1] the tubercular patient can with comfort

[1]Chas. Fox Gardner: "The Care of the Consumptive."

live an open-air life throughout the entire year in those regions recognized as being the most desirable.

Colorado is blessed with altitude, exhilarating dry air, blue sky, and bright sunshine, and these factors are most important from a medical standpoint. Altitude causes diminished atmospheric pressure, and greater rarity of the air, resulting in increased lung expansion, without unnatural effort. At sea level this can be acquired only by resorting to deep breathing exercises, chest gymnastics, or both.

Altitude also affords a degree of absolute and relative atmospheric humidity which is much less than at warmer places of lower elevation. This question has been much discussed. Dettweiler and others have maintained for many years, and have attempted to prove, that temperature, atmospheric pressure, and humidity scarcely influence the condition of the consumptive. Yet we have conclusive clinical proof from observations made in Colorado and elsewhere which refutes this theory.

In the recognized health resorts of Colorado mists are of very uncommon occurrence. Colorado has fewer cloudy days and more blue sky, varying, of course, according to the season of the year, than Eastern health resorts. The air has a greater transparency, owing to the absence of clouds and mists and the low degree of absolute humidity; the sun's rays are more powerful and direct than in low altitudes. The sun renders the air more nearly aseptic, and its beneficial effect upon the physical and mental condition of the patient is unquestionable.

It is true that the summer months are hot, but the heat is not enervating, and can be borne with comfort. There is a difference of many degrees between the temperature in the sun and that in the shade, due to the rapid and unimpeded radiation from the ground, through the dry, clear atmosphere.

It has long been recognized that mountain air is free from organic and inorganic dust, and microörganisms. This, of course, can be accounted for in a measure by the sparseness of the population and by the influence of light.

So much has been written regarding the climate of Colorado and the Rocky Mountain regions, and especially the climate of Denver, that I feel justified in quoting a few observations made by Mr. F. H. Brandenburg, district forecaster, U. S. Weather Bureau, stationed at Denver. His observations cover a period of some years, and are to be relied upon. He says: "Discarding fractions of a degree, the mean average temperature of Denver is 50°. During the last thirty-two years 100° or higher has been

touched just thirteen times in Denver. While these high temperatures were maintained only for a few minutes, readings in the nineties are common in every summer month. For July, the warmest month, the average temperature is 72°, and the average maximum, or afternoon reading, is 87°. Pretty high, it is true, but, on the other hand, the average minimum, or night, temperature, for July is 59°, which all will agree is very comfortable for midsummer. The coldest month is January, with an average temperature of 29°. Zero or lower has been noted 343 times in the thirty-two years. These readings are night temperatures, and not to be confounded with the mean temperature, nor with the maximum temperature. The annual precipitation, which includes rain, snow, sleet, and hail, is 14.00 inches; Chicago, 34.8 inches; Boston, 45.0 inches. May, the wettest month of the year, has an average of 2.61 inches, and April, the next in order, 2.01 inches. The average number of days with 0.01 of an inch or more precipitation is 81, against 120 at Chicago, and 121 at Boston. This is an excellent showing, in view of the fact that this number represents in the case of Denver not days with continuous rain, but principally days with showers of short duration. Of sunshiny days, we have 69 per cent of the possible, as against 53 at Chicago and 54 at Boston. It is of interest to note that in these cities the greatest number occur in the summer months, while with us the winter months bring the highest percentages. Thus for the winter months our average is above 70 per cent, while the lowest average for any month, 61 per cent, is for May. Only once in twelve years has the monthly average of sunshine fallen below 50 per cent. Occasionally the monthly average is as much as 89 per cent. On the other hand, we have some days without any sunshine. There are not many such days, however. The average is one day a month.

"The average relative humidity is slightly below 50 per cent, while at Chicago it is 77 per cent, and at Boston it is 72 per cent, and in the Atlantic States the humidity during the warm months is greater than the normal, the reverse of that which obtains in Denver. In brief, our summers are characterized by warm days and cool nights, the heat of the day not attended by the usual debilitating effects; our winters by an abundance of sunshine, and the general absence of snow and of severe and long-continued cold."

Climate alone, however, cannot be depended upon to effect a cure, and it is a great mistake to advise a patient to go to Colorado or any other health resort, and follow his own inclina-

tions. Only two safe courses are open to the health-seeker. He may either employ the services of a competent physician, or he may enter a sanatorium. When it is possible, the latter course is advisable.

This brings us to the consideration of the subject in hand, "Sanatorium Treatment of Tuberculosis in Colorado." Colorado has been spoken of as the "Hospital State" of the Union, but it has few institutions in proportion to the thousands of people who go there seeking health. Though there are many of these constantly springing up, and for various reasons passing out of existence, still there remain institutions both large and small scattered through the State that are doing excellent work. I will mention only some of the most prominent ones.

At Amity there is the Emma Booth-Tucker Memorial Sanatorium for Consumptives, a tent colony, erected and maintained by the Salvation Army.

The Glockner Sanatorium, a Roman Catholic institution, the Nordrach Ranch, a tent colony, and Dr. Solly's Cottage Sanatorium, "Cragmor," are the three principal ones at Colorado Springs.

The Association Health Farm is a tent colony west of Denver and under the auspices of the Y. M. C. A.

The National Jewish Hospital for Consumptives, built on the pavilion plan, and the Jewish Consumptives' Relief Society, a tent colony, both situated in Denver, are the largest free institutions in the State.

The "Home," at Denver, is not, strictly speaking, a sanatorium. It is a splendidly equipped church home for consumptives.

All of these institutions are doing good work, according to their means, and in their several fields.

I have been asked to speak in detail of the institution with which I am connected, the Agnes Memorial Sanatorium.

Mr. Lawrence C. Phipps has erected this institution in Montclair, a suburb of Denver, as a memorial to his mother, Mrs. Agnes Phipps, at a cost, including the endowment, of over half a million dollars. The Sanatorium, a closed institution, was the first of its kind to be established in the Western States, and was opened for the admission of patients July 2, 1904. It is situated on dry, sandy soil, at an altitude of about 5400 feet, and commands a most magnificent view of the Rocky Mountain Range from Pike's Peak to Long's Peak, a distance of one hundred and fifty miles.

The buildings are designed after the old Spanish mission style of architecture, adapted to our requirements, and differing from the original Spanish mission in having the porches high and airy, allowing the sun's rays access to all the rooms.

The construction is of rough brick, covered with Portland cement in its natural color, a warm gray, roofed with red tile. The institution at present has two pavilions for the housing of patients, a three-story administration building, a medical building, a power plant, and twenty house tents, besides an open-air pavilion of wooden construction which we have recently erected.

Each of the two large pavilions, one of which is for men and the other for women, accommodates forty patients, twenty on each floor, each story being surrounded by wide porches. On each floor there is a linen room and a chambermaid's workroom, also a tiled bathroom with tub, sitz, shower, and needle baths.

The patients' rooms are 11 by 14 feet, with rounded corners, washable walls, and high ceilings. Each room has a large window and transom, and the outer door, wide enough to allow the passage of the bed, opens upon a wide veranda. By means of movable canvas curtains the veranda may be divided, giving to each patient an individual sleeping porch, and an opportunity for privacy during the day, should he so desire.

On these porches the patients spend almost the entire twenty-four hours, summer and winter, except in very inclement weather, when the beds are moved into the room. Within the room there is a specially devised ventilating system, taking the impure air from the floor, which, in connection with the doors, transom, and windows, furnishes the patient with from 15,000 to 18,000 cubic feet of fresh air per hour.

All rooms and corridors throughout the entire institution have washable walls painted in pleasing colors; all corners are rounded, and the finish is of hard wood, highly polished.

The situation of the buildings is such that the direct sun's rays penetrate into each room at some time during the day. The rooms are heated by the Paul vacuum system, the "direct indirect" method. All buildings and tents are lighted by electricity, which is the only safe and sanitary method of lighting any institution of this character.

The open-air pavilion accommodates sixteen patients, and is designed to furnish at a moderate cost of construction ($150 per bed) suitable quarters for those unable to afford the regular pavilion rates.

The medical building is a two-story structure, having on its ground floor the consulting and waiting rooms, a pharmacy, and examination and treatment rooms. The *x*-ray room is equipped with a Carstarphen 20-inch coil and high-frequency apparatus, and is also arranged for skiagraphy. A fully equipped clinical laboratory completes the rooms on the first floor.

The second floor is the hospital department, for those patients ill enough to require special nursing, as in cases of hemorrhage, pneumonia, etc. On this floor there is a well equipped operating room and a diet kitchen, besides an isolation room for use in contagious diseases.

In the administration building are the business offices, reception and board rooms, library, dining-room, and kitchens. The second floor is devoted to staff quarters and the main linen room. The "L" of this building is given up to quarters for servants. The third floor has nine extra patients' rooms, and a commodious and well ventilated assembly hall, with a stage for theatricals.

In the kitchen there is a model power washing and sterilizing machine, where all dishes and silverware are sterilized directly after each meal.

An underground passage extends from one end of the institution to the other, affording access to all buildings, and is used by the patients to reach the dining-room and medical building during inclement weather.

The power plant, a model of its kind, furnishes electric light, power, and refrigeration for cold storage and the manufacture of ice. In connection with the electric laundry, which is in this building, is a complete sterilizing plant, in which all bed and table linen, as well as the patients' laundry, is sterilized before being received into the laundry proper.

At the rear of the power house is a room containing a crematory. When the plant was in process of construction I found that there was on the market no device for quickly and economically destroying such infected material as accumulates about a hospital. After investigation I was successful in perfecting an apparatus which accomplishes the desired end in an efficient manner. I use a crude petroleum blast, furnishing heat of over 2000 degrees, in which the débris is completely reduced to ash almost immediately.

The patients are furnished with Seabury & Johnson paper sputum cups in a covered aluminum holder. For those taking exercise, the pocket cup manufactured by the same company is

supplied. Twice daily the cups and holders are collected, the cups are burned, and the holders sterilized in another special device, by live steam.

(To be continued.)

PROBLEMS OF THE RIGHT PROXIMAL QUADRANT OF THE ABDOMEN.

BY BYRON ROBINSON, CHICAGO.

The problems to solve in the right proximal quadrant of the abdomen are the most difficult in abdominal surgery. In this preliminary note I wish to offer some facts gained in abdominal surgery and many years of autopsies. Mr. Lawson Tait, my well remembered teacher, solved many problems in the female pelvis. However, the problems of the female pelvis or distal abdomen were not as difficult as those of the right proximal abdominal quadrant, because the pelvis is more accessible to palpation (hence diagnosis is more certain) and safe for surgery. First and foremost I wish to oppose the pernicious and dangerous idea (fortunately uttered by few) that surgery of the proximal right quadrant of the abdomen should be learned, solved, on the living subject. The pathology which cannot be found in the dead is imaginative in the living. The pathologic condition which demands an operation must be a recognized entity. The pains and aches, the indigestion of neurotics, are not pathognomonic of a duodenal ulcer, nor is it rational surgery to perform a gastroenterostomy for a condition which a few weeks' vacation and rest will relieve. During the past fifteen years I have personally inspected the abdominal viscera in over 700 autopsies. First and foremost it may be stated that among these 700 autopsies no duodenal ulcer occurred (except in gastric or pyloric carcinoma), nor a single case of hemorrhagic pancreatitis. I am convinced that the recent numerous duodenal ulcers reported by a few surgeons are exaggeratedly erroneous, and that the frequent reports of hemorrhagic pancreatitis are often mistaken diagnoses. Both duodenal ulcers (except accompanying carcinoma) and hemorrhagic pancreatitis are rare diseases.

THE PROXIMAL 2½ INCHES OF THE DUODENUM.

The duodenum is one of the most important segments of the tractus intestinalis because the biliary and pancreatic ducts have their exit in its lumen, and it is the first common receptacle for

the bile and pancreatic fluid as well as the stomach contents after gastric digestion.

The duodenum is not the weakest segment of the tractus intestinalis, for that distinction belongs to the appendix (which is practically found only in man, orang, and wombat). The duodenum is the proximal end, the beginning portion of the enteron, the business or functional segment of the digestive tract.

In the duodenum it is the proximal 2½ inches that chiefly concerns the physician, for in this foldless, granular mucosa

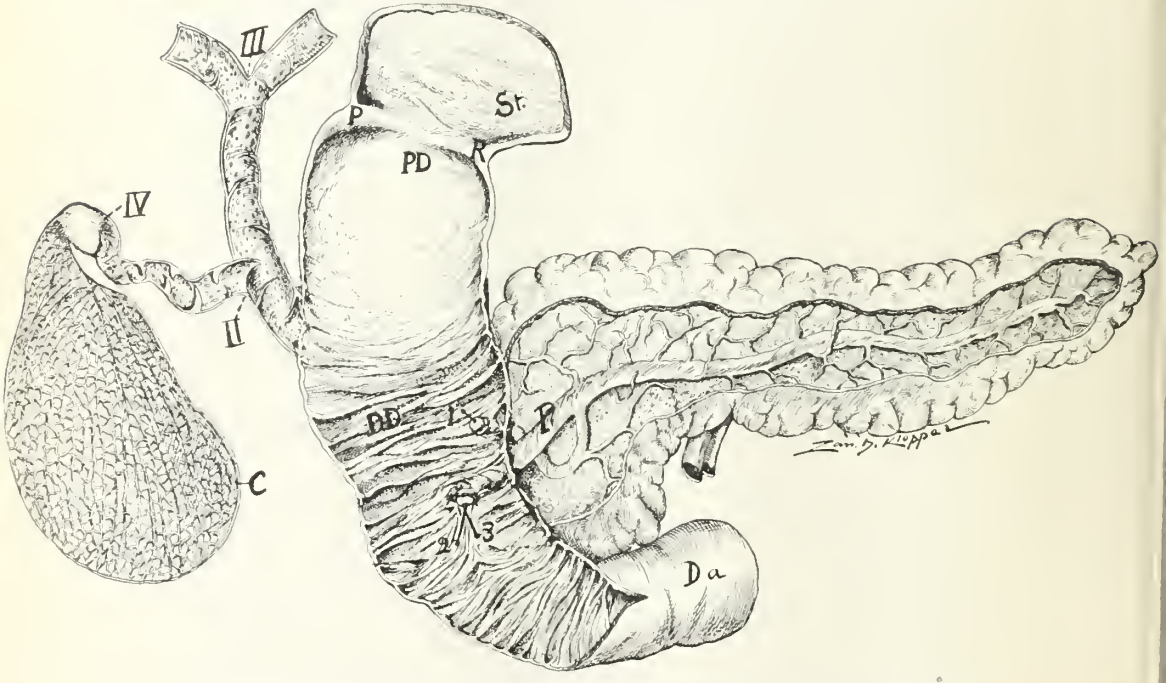

Fig. 1.—Proximal 2½ inches of the duodenum. This illustration is drawn from a specimen of a healthy male 74 years old, and presents the proximal 2½ inches of the foldless, granular, duodenal mucosa (*PD*). Observe that the valvulæ conniventes begin immediately proximal to the entrance of the duct of Santorini (*DD*).

lying between the pyloric ring and the exit of the ductus communis choledochus is the location of the duodenal ulcer. It appears to me that the valvulæ conniventes, valves of Kerkring (Theodorus Kerkring, Dutch anatomist, 1640-1693, professor in Hamburg), practically begin at the duodenal exit of Santorini's duct (Domenico Giovanni Santorini, Italian anatomist, 1681-1737, professor in Venice). The valvulæ conniventes begin slightly proximal to the duodenal entrance of the ductus accessorius pancreaticus by transverse mucous folds, limited in dimen-

sions (length, diameter, height). This significant proximal 2½ inches of duodenum possesses a foldless, granular mucosa.

As to the etiology of duodenal ulcer we must study (1) the structure (glands, nerves, vessels, mucosa, muscularis, serosa); (2) chemical effects (acid, alkali); (3) trauma (food and foreign bodies). I have examined a number of animals and find them similar to man—a foldless, granular mucosa in the proximal duodenum. In the post-mortem on a horse I found in the proximal duodenum some sixty of the larvæ of the bot-fly (*Gasterophilus equi*) fixed firmly to the duodenal mucosa by their

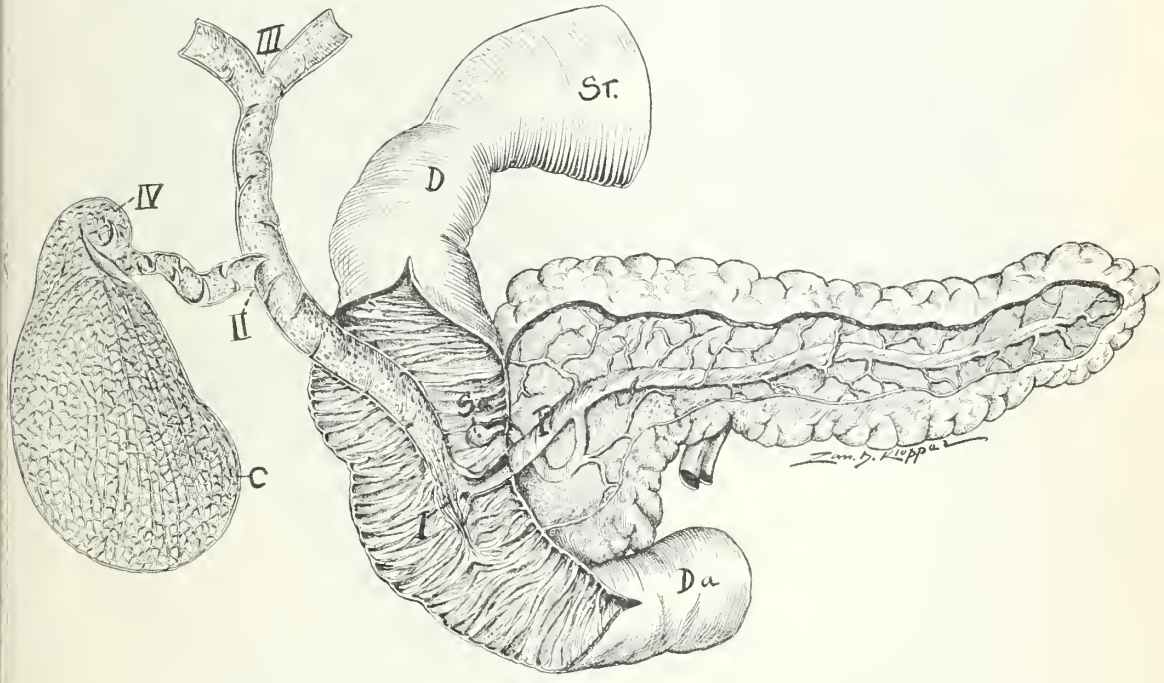

Fig. 2.—Relation of the biliary and pancreatic ducts in the duodenum. This illustration is from a specimen with biliary and pancreatic ducts exposed and incised longitudinally.

black hook-like tails. The larvæ had produced enormous hypertrophy of the follicles in the foldless, granular, duodenal mucosa, but no ulcer existed. One of the problems of the right proximal quadrant of the abdomen will be to learn when not to operate on absent duodenal ulcers.

RELATION OF BILIARY AND PANCREATIC DUCTS.

Another problem in the right proximal quadrant of the abdomen is the relation of the liver to the pancreas, or more specifically

the relation of the ductus bilis to the ductus pancreaticus. We must study whether the relation is (1) mechanical, (2) chemical, or (3) bacterial. First and foremost in autopsy the pancreas is seldom macroscopically diseased, while the liver is frequently

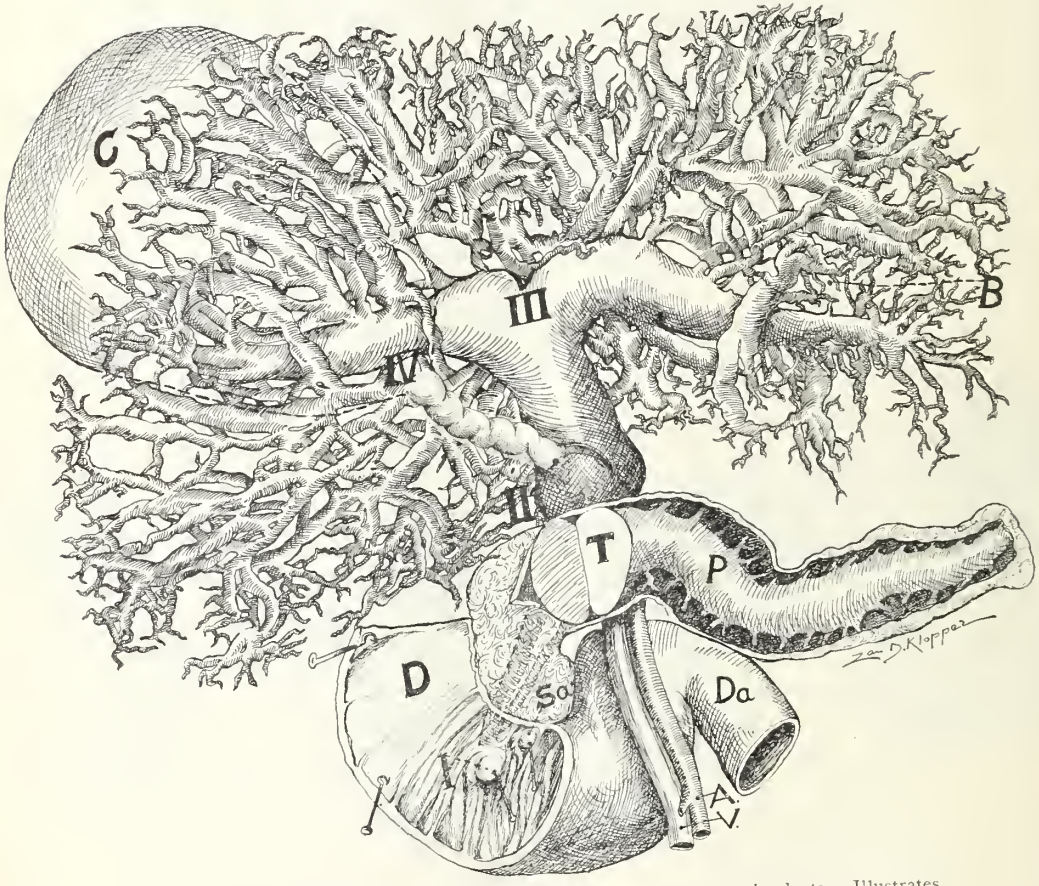

Fig. 3.—Carcinoma completely obstructing the biliary and pancreatic ducts. Illustrates an *x*-ray of enormously dilated biliary passages. The biliary ducts (excepting the gall-bladder, which was three to four times its normal dimension) had a capacity of 32 ounces, about six or seven times the natural capacity. The ductus communis choledochus was over 1¼ inches in diameter. The pancreatic duct admitted the index-finger. The man, 69 years old, a giant in stature, weighing some 250 pounds with ordinary limited fat, lost 115 pounds in weight during three months' illness. The ductus cysticus, extending from *II* to *IV*, had seven Heister's valves, and its lumen would admit a lead-pencil only. At *B* the biliary ducts were deficient within the liver substance, but were really dilated on the surface. *T*, the carcinoma (divided with the scalpel), completely severing the lumen of the biliary and pancreatic ducts. There was enormous gastroduodenal dilatation from the compression of the transverse duodenum by the superior mesenteric artery (*A*) and vein (*V*). *D*, foldless, granular, proximal 2½ inches of the duodenal mucosa; *I*, entrance of ductus communis choledochus in the duodenum; *Sa*, ductus Santorini; *P*, ductus pancreaticus. The ductus communis choledochus and ductus pancreaticus, located between the carcinoma and Vater's diverticulum, were normal. *Da* is the normal sized duodenum located distal to the compressing superior mesenteric vein (*V*) and artery (*A*). Observe the vast dilatation of the duodenum proximal to the superior mesenteric artery (*A*) and vein (*V*). I secured this rare specimen at an autopsy through the courtesy of Dr. Charles O'Byrne.

found in a macroscopic pathologic state (scirrhotic, fatty, atrophic, hypertrophic). Does calculus (hepatic or pancreatic) in the diverticulum of Vater direct damaging currents through the ductus pancreaticus or ductus bilis? This appears probable from autopsy. Does the biliary fluid damage the pancreas by traversing its duct, or does the pancreatic fluid damage the liver by traversing its duct? Both bile and pancreatic fluid flow at a low pressure. These problems are still unsolved. There can be no doubt that bacteria traversing the biliary or pancreatic duct do the chief damage both to liver and pancreas, especially when a calculus be present, as its trauma creates lesions—atria for infec-

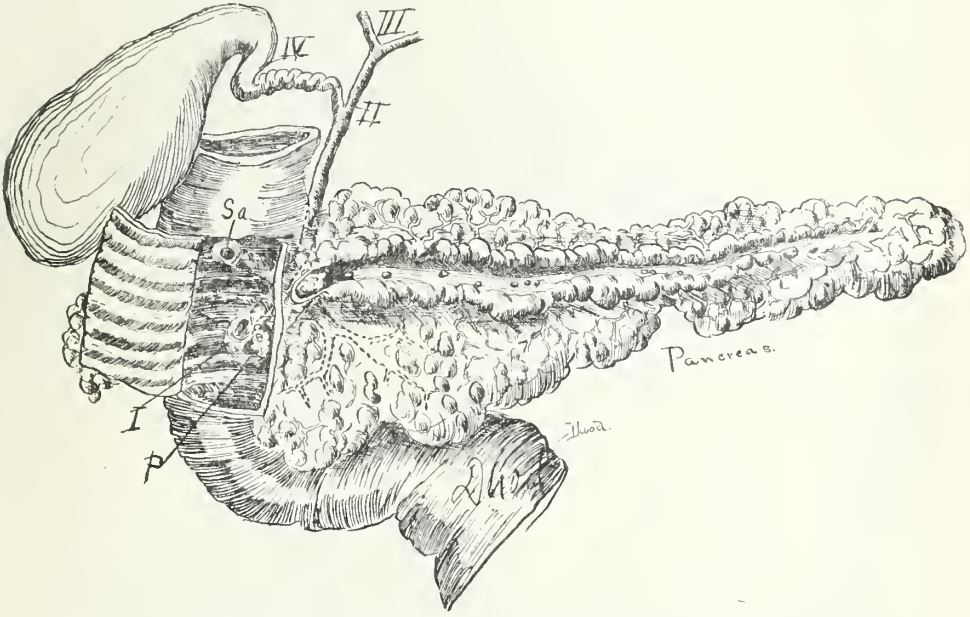

FIG. 4 (Byron Robinson).—Specimen containing pancreatic calculus. From a post-mortem, man about 40 years. *I* to *II*, ductus choledochus; *II* to *III*, ductus hepaticus; *III* to *IV*, ductus cysticus; *Sa*, ductus pancreaticus accessorius; *P*, separate exit of ductus pancreaticus in duodenum. A calculus ¾ inch in length and 1/6 inch in diameter is incarcerated in the duct of the caput pancreaticum. The calculus of the pancreatic duct projects into the lumen of the duodenum. Also six calculi existed in the ductus pancreaticus, as noted in sketch. The pancreas was in an advanced stage of suppuration and fatty degeneration. This specimen was kindly presented to me by Dr. A. M. Stober. B. J. Beuker sketched it from the pathologic laboratory of Cook County Hospital.

tion. Biliary calculus is formed at any location of the ductus bilis where pathologic bacteria traverse it, and a similar condition exists in the ductus pancreaticus. Since anatomically ductus bilis and ductus pancreaticus are directly connected by patent, communicating channels; since, physiologically, the products of the liver (bile) and products of the pancreas (succus pancreatis)

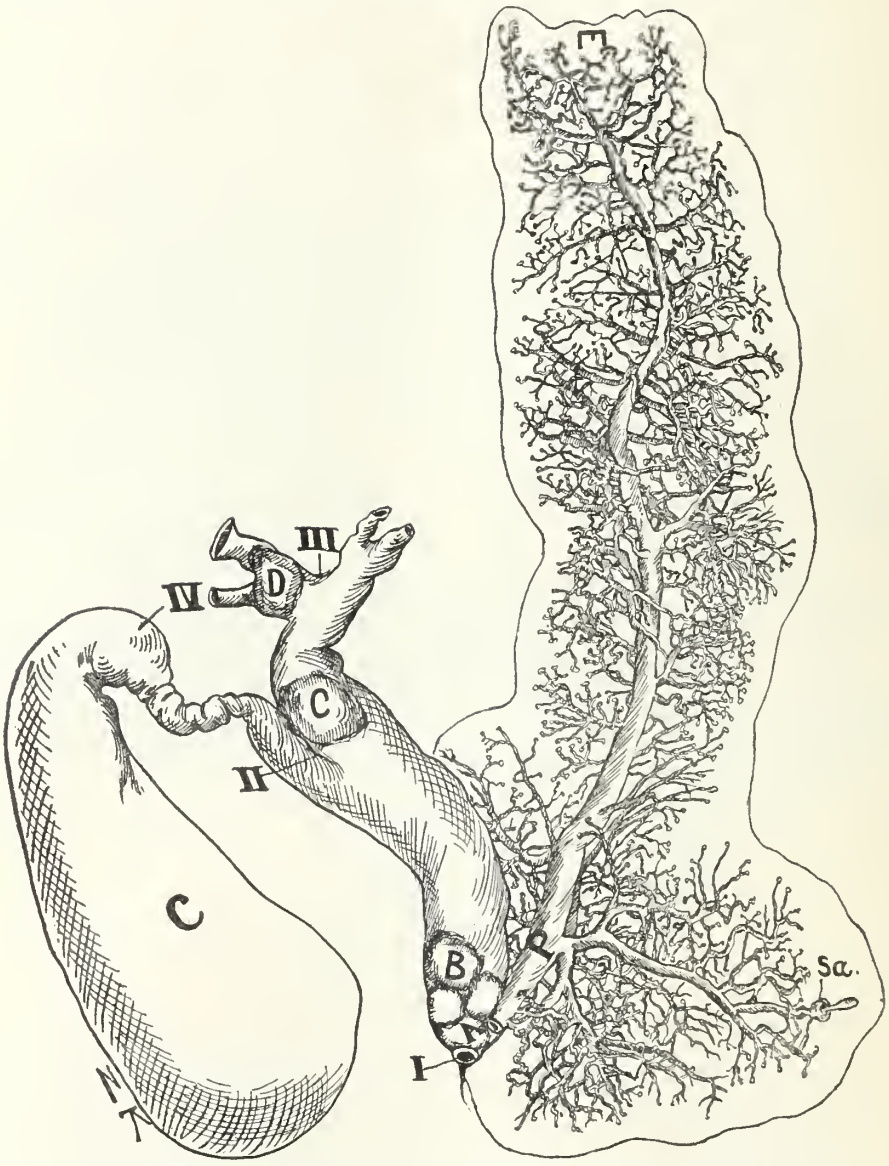

FIG. 5 (Byron Robinson).—Roentgen ray of the ductus pancreaticus and part of ductus bilis (it contains six hepatic calculi). From post-mortem specimens. *I* to *II*, ductus communis choledochus, dilated to ¾ inch in diameter and containing four hepatic calculi (*A, B*) in its distal end; *II to IV*, ductus cysticus dilated to 1/3 inch in diameter, yet preserving in form six valvulæ Heisterii; *II* to *III*, ductus hepaticus, dilated to ½ inch, containing a hepatic calculus; *C*, cholecyst, normal dimension, containing no calculus; *P*, ductus pancreaticus (ductus Hofmanii-Wirsungii), ductus pancreaticus accessorius (ductus Santorini). The ductus bilis and ductus pancreaticus are characterized by spirality and irregularity of lumen. The lateral pancreatic ducts end in bulbs or vesicles. This specimen illustrates the facility with which the ebb and flow of infectious waves may travel from the channels of the liver to those of the pancreas, and *vice versa*. For the *x*-ray the ductus pancreaticus was injected with celloidin and sulphide of mercury, while the ductus bilis was injected with red lead and starch. The presence of a calculus had created suppurative choledochitis. The exit of the ductus pancreaticus into the ductus choledochus was widely patulous. Hepatic calculus may be formed in the hepatic and intrahepatic ducts external to the cholecyst. Elephants possess no gall-bladder; however, they are subject to hepatic calculus. I secured the specimen at an autopsy by the courtesy of Prof. W. A. Evans.

become mixed previous to their arrival in the duodenum; and since, pathologically, bacterial disease, calculus, toxins, and neoplasms in the one duct may affect structures and functions belonging to the other duct, increasing clinical interest is being centered on these ducts. As cholelithiasis is a frequent disease and mainly manifest in the distal bile ducts, it is liable to affect the ductus pancreaticus; hence the increasing importance of study of these two ducts. The short channel—Vater's diverticulum—formed by the union of the ductus choledochus and ductus pan-

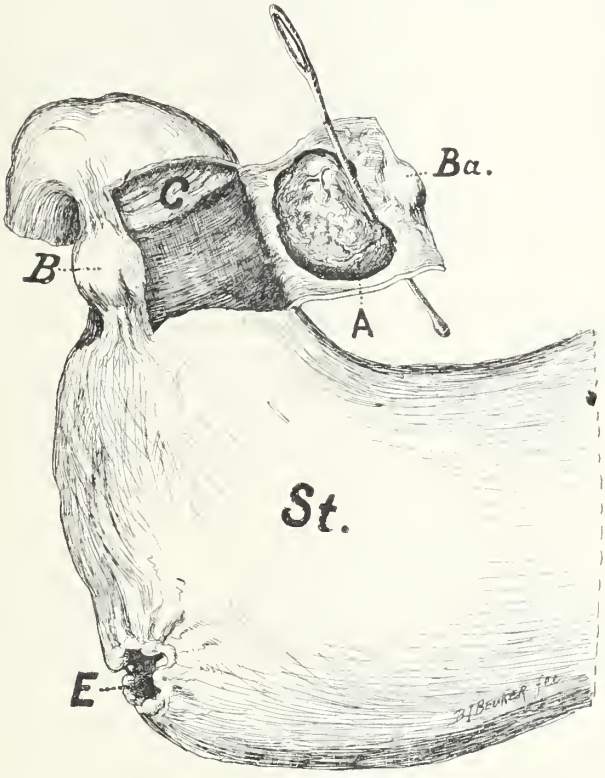

FIG. 6 (Byron Robinson).—Gastric ulcer. This illustration represents an ulcer in the pyloric or distal end of the stomach. The man refused operation, though several hemorrhages occurred, until finally a hemorrhage of two quarts induced him to submit to an operation, with fatal results. *B, Ba,* tumor; *C,* pyloric ring; *E,* anastomosis where the Murphy button was placed; *A,* ulcer area; the probe passes through a perforation in the base of the ulcer. This rare specimen was kindly presented to me by Dr. Vaughn L. Sheets, who secured it at the post-mortem of his patient.

creaticus is subject to extensive variations in dimensions—double. In the first place the right terminal end of the ductus pancreaticus presents a distinct constriction which frequently dilates into an ampulla—a diverticulum. In general, the ductus pancreaticus makes its exit into the ductus choledochus about one-third of

an inch from the orifice of the common bile duct into the duodenum.

In the second place, the ductus communis choledochus has a distinct constriction at its orifice in the duodenum. The constriction of the orifice of the ductus pancreaticus at its exit in the bile duct and the constriction of the orifice of the ductus choledochus at its exit in the duodenum form, in general, an olive-shaped space, an ampulla, a diverticulum which is liable to harbor a calculus for a longer or a shorter time, obstructing both ducts. However, this one-third of an inch bile channel is so short and wide, with dilating capacity, that the obstruction is liable to be temporary. The duodenal orifice of the ductus bilis is about one-tenth of an inch in diameter, while the orifice of the ductus pancreaticus at its exit in the ductus choledochus is about one-half as much, one-twentieth of an inch. The structural arrangement of the biliary and pancreatic ducts forces the bile and pancreatic fluid to become mixed in the ductus communis choledochus.

In this note I will present some illustrations secured from autopsies which, though typical, at least are not very frequent occurrences. These illustrations taken from post-mortems are not only instructive as to the difficulties of diagnosis, but also are suggestive as to the appearance of some diseases in the right proximal quadrant of the abdomen.

The consolidation of the Medical Society of the State of New York and the New York State Medical Association, authorized by the first act of the legislature of 1904, was registered in the Secretary of State's office December 14 by the filing of an order signed by Supreme Court Justice John M. Davy. The new society will be known as the "Medical Society of the State of New York."

For a few years past there has been a steady decrease in the number of medical students in France, Germany, and the United States. In France the number has diminished from 7779 in 1895 to 6763 in 1905. In Germany the number, which from 1858 to 1888 had shown a steady increase, began to fall after that period. While in 1888 there were in German universities 8513, in 1903 there were only 6232. The number of students in the United States in 1904 was 28,142; in 1905 it had fallen to 26,147.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE PRESERVATION OF THE INDIVIDUAL FROM SYPHILIS.

The habit of regarding syphilis solely from the sociological standpoint has somewhat obscured the situation from the individual point of view. The recent research work of Metchnikoff and Roux made on apes, chimpanzees, and monkeys, the result of which is published in a recent number of the *Annals of the Institute of Pasteur,* appears to be of more than ordinary significance, and if the ape and man be similar in construction it seems to promise a treatment for the prophylaxis of syphilis which is hopeful in its outlook.

The results achieved by Metchnikoff and Roux tend to prove that if one hour after having inoculated an ape with syphilis one subjects the point of inoculation to friction with a mercurial ointment, the ape is certainly protected against the dangers of contamination. If the same be true of man, those exposed to suspicious contact might save themselves from the results of syphilitic inoculation by the application of a calomel ointment to the region of the body put in danger. This, however, hinges upon the identity of the man and ape in this matter.

The following are some of the results reported by these investigators:

A chimpanzee was inoculated under the superciliary ridges with virus from indurated chancres of two people affected with syphilis. Three-quarters of an hour after the inoculated parts were rubbed ten minutes with mercurial ointment. This treatment produced a local inflammation of the superciliary region. Some days after the application this part was covered by a dry eschar, which later fell away. No syphilitic lesion followed. This cannot be attributed to inefficient virus, as another chimpanzee subjected to the same inoculation developed typical chancres twenty-eight days after inoculation.

A chimpanzee was inoculated in the same way by virus from the chancres of two syphilitic individuals. The site was rubbed with an ointment composed of 10 parts of calomel and 20 of lanolin. This animal died thirty-two days later of bronchopneumonia, and no trace of syphilitic lesion was discovered. A monkey treated in the same manner died 110 days later, but without syphilitic complication.

Many similar experiences are recorded by these investigators. Control experiments seem always to have accompanied the original experiment. Their conclusion is that the ointment acts by annihilating *in situ* the action of the virus. The application of sublimate solution one hour after inoculation was invariably without effect and syphilitic lesions ensued.

It is certainly a matter of importance to call the attention of the practitioner to these results. If syphilis can be prevented by the simple application of a mercurial salve to the contaminated parts, let it so be known. At present the application of mercurial ointments is too irritating to make this method of prevention extremely popular or even feasible, but there are mercurial preparations that are only mildly irritant, and pharmaceutical ingenuity may be trusted to provide the remedy provided the facts be true. It remains to be proven that man and ape are the same in respect to this reaction.

EDITORIAL NOTES.

A Bill to Increase the Efficacy of the Army Medical Corps.

There has already been introduced in the present session of Congress a bill which has for its object an increase in the efficacy of the army medical corps. Similar bills have since 1898 failed to pass, owing doubtless to the fact that the politicians have nothing to gain, in the way of appointments, by supporting such a measure. Gen. Leonard Wood in a recent letter to the Secretary of War, in which he urges the passage of the present bill, says: "Our experience during the war with Spain should be sufficient to render recurrence of the conditions then prevalent impossible. First-class men in sufficient numbers cannot be secured under the present conditions of promotion." He further said: "The system of employing contract surgeons is a makeshift and an expensive one. Our policy has been to expand the medical department in time of war through the employment of

inexperienced civilian medical men. These gentlemen, whatever their professional attainments, know little of army methods or the handling of large bodies of men." We sincerely trust that this bill for the reorganization of the Army Medical Department will be made a law without delay. It behooves every physician in the country to use what influence he may have with his representative to help in this matter.

Copper Sulphate Unreliable as a Germicide.

The use of copper sulphate in weak solutions to render the water-supply of cities free from germs has been strongly advocated of late by a number of investigators who have claimed that its use will render the water safe. From the reports of the Bureau of Government Laboratories at Manila it appears from the tests made by the government chemists that solutions of copper, unless used in such strength as to render the water unfit for drinking, are a complete failure. These reports will be very disappointing to health authorities, for great hopes had been entertained that by the use of weak solutions of copper sulphate the grave menace of water-borne diseases, such as typhoid fever, cholera, etc., would be a thing of the past.

War Between Doctors and Druggists.

We learn from a Western exchange that two hostile petitions are being circulated in Iowa for signatures, and will later be presented as bills before the legislature of that State. One has been drawn up by the physicians and asks that druggists be restrained from counter prescribing, while the one circulated by the druggists provides that physicians shall be prohibited from compounding prescriptions. We can only hope that if these two absurd measures should ever reach the State solons they will both be defeated, as they deserve.

A New Cancer Cure.

Of late a number of English newspapers have contained glowing accounts of a new cancer cure alleged to have been discovered by a Dr. James Fenwick, of Accrington. The doctor says the time is not ripe for him to reveal his secret. As the number of cures claimed by the doctor only amount to nine in ten years the remedy does not appear to be one of very great efficacy.

ITEMS AND NOTES.

Prof. von Leuthold, surgeon-general of the German army and the Emperor's body physician, is dead.

The yield of cascara bark from the vicinity of Tacoma, Wash., is fully a thousand tons for the season.

The next Congress of Electrobiology and Medical Radiology will be held at Milan from September 5 to 9, 1906.

Plans for the new Army General Hospital, to be erected in Washington, D. C., have been accepted by Secretary Taft.

There is an excellent prospect of amalgamation between the Medical College of Virginia and the University of Virginia.

It has been decided that the third meeting of the Congress on Pellagra shall take place at Milan on September 26, 27, and 28, 1906.

The next International Congress of Hydrology, Climatology, Geology, and Physical Therapeutics will be held at Algiers, October 5 to 10, 1906.

Dr. William F. Forien died at his home in Baltimore on November 7, aged thirty-four. Dr. Forien was a graduate of Baltimore Medical College in 1899.

The wards of the Chicago Isolation Hospital have been empty for more than a month, and there is not a single suspect case of smallpox under observation in the city.

Prof. William H. Welch, of Baltimore, has been elected a member of the Board of Trustees of the Carnegie Institution, in place of the late Secretary of State Hay.

Chile furnishes a modern instance of the ancient horrors of epidemic smallpox. In Valparaiso there are said to have been 11,000 cases since January, 1905, and more than 5000 deaths.

Professor Czerny, of Heidelberg, has founded a gold medal in memory of his father-in-law, the famous clinician Kussmaul, who died in 1903. The medal, together with a prize of $250, will be awarded every three years for the best German research on therapeutics.

THE Chicago Medical Society has inaugurated the plan of having its members deliver popular lectures to the laity on subjects pertaining to medicine. These lectures are well attended, and the people take great interest in them.

THE population of Bulgaria, aggregating less than four millions, is stated in a recently issued report of the Sanitary Department of the Bulgarian Minister of the Interior to include as many as 330 persons, male and female, over 100 years of age.

THE next course of vacation lectures given by the Association of Privatdocenten in Berlin will commence on March 11, 1906, and terminate on March 28. Further particulars can be obtained on application to Herr Melzer, Ziegelstrasse 10/11 (Langenbeck-Haus), Berlin.

THE Council of the University of Paris, at an extraordinary meeting presided over by M. Liard, the vice-rector, unanimously accepted the offer by the Duc de Loubat of the sum of 400,000 francs ($80,000) for the creation of a chair of clinical therapeutics in the Faculty of Medicine.

THE Fifteenth International Medical Congress is to be held at Lisbon in April, 1906. A preliminary programme of the tours of the American party attending the congress has been issued. Copies of this programme can be obtained from Dr. Charles Wood Fassett, Krug Park Place, St. Joseph, Mo.

THE *New England Alkaloidist* is the title of a new monthly journal published at Milford, Mass., under the editorial management of Drs. J. M. French and N. W. Sanborn. Its purpose is to advocate the therapeutic use of the alkaloids and other active principles, as tending to greater accuracy and more positive results.

PROFESSOR CZERNY has resigned the chair of surgery in the University of Heidelberg, which he has held since 1877, in order to devote himself entirely to the duties of director of the Institute of Cancer Research. He will be succeeded in the chair of surgery by Professor Garre, who accepted a "call" to Breslau after the death of Professor von Mikulicz.

DR. W. W. FORD, instructor in bacteriology at Johns Hopkins Medical School, has produced an antitoxin for mushroom poisoning. His serum has been produced in the usual way, by the inoculation of increasing doses of the mushroom toxins into

animals until their serum becomes antitoxic. The protective power of the serum has been proved for animals, but not for man.

A BILL has been introduced in Congress by Representative Brownlow to establish a corps of dental surgeons attached to the Bureau of Medicine and Surgery of the Navy. The bill divides the dental corps into three grades, "assistant dental surgeon," "passed assistant dental surgeon," and "dental surgeon," who shall have the same rank, pay, and allowance as officers in corresponding grades of the medical corps.

AMONG the Russian students of both sexes working in the medical and other faculties of the University and in the art schools of Paris much distress is stated to have been caused by the recent occurrences in Russia. The great majority of the students live on remittances from home, and these they have not received, in some cases owing merely to the breakdown of postal arrangements, and in others because those who used to send them have been ruined.

THE president of the general medical council at a meeting recently held in London, England, stated, says a contemporary, that the effect of the General Laurie amendment (1905) to the British medical act would allow of the provinces of Canada applying for the privilege of medical reciprocity with the United Kingdom. It is expected in England that some, if not all, of the provinces of Canada will extend the same privileges to graduates of the United Kingdom.

THE Rockefeller Institute for Medical Research, to which John D. Rockefeller has already given three millions of dollars, will be ready for occupancy this month. The Board of Directors consists of the following: Dr. William H. Welch, Baltimore, president; Dr. T. Mitchell Prudden, New York, vice-president; Dr. E. Emmet Holt, New York, secretary; Dr. Christian A. Herter, New York, treasurer; Dr. Simon Flexner, director of laboratories; Dr. Hermann S. Biggs, New York, and Dr. Theobald Smith, Boston.

THE French Permanent Committee of the Tuberculosis Congress has, it is stated, written to President Roosevelt accepting his invitation to hold the next meeting in the United States. The committee, at the head of which are M. Casimir-Perier, ex-president of the French Republic, and M. Leon Bourgeois, expresses

its satisfaction at the fresh opportunity offered by the congress of strengthening the friendly relations between France and the United States, which have so many times coöperated in furthering the interests of mankind.

The Nobel prizes, each amounting to about $40,000, were distributed by King Oscar at Stockholm on December 10. The list includes the following: Physics—Philip Lenerd, professor at Kiel University, for researches into cathode rays. Chemistry—Adolph von Boeyer, professor at the University of Munich, for research leading to the evolution of organic chemistry and the development of chemical industry. Medicine—Prof. Robert Koch, of Berlin, for research on the prophylaxis of tuberculosis. Literature—Henri Sienkiewicz.

It is estimated that there are some 300 lepers in the United States. They are scattered through twenty-one States and Territories, but the six States of Louisiana, California, Florida, Minnesota, and North Dakota have all but forty-eight of them. In Louisiana there are 155 cases, recruited for the most part from persons who have gone there from Southern Europe; California and Florida each have 24 cases; in Minnesota there are 20, and in North Dakota 16. There are five cases each in Illinois, Mississippi, and Wisconsin. The other States in the list have from one to two cases each. In 186 of the cases the disease was contracted in this country. Only 72 of the total number of lepers are at present isolated.

In the city of Bahia during the epidemic of 1887 there were, says an exchange, 1676 deaths from variola alone. The people adopted general vaccination, and the epidemic declined the following year; in 1899 there were only ten deaths, and in 1900 none; in 1902 there were two deaths, and in 1903 only one death from this cause. In Rio de Janeiro in 1903 there were 805 deaths from variola; in 1904, owing doubtless to the great antipathy of the people here to vaccination, the number of deaths from this cause reached the large figure of 3566, and up to date this year there have been 221 deaths from variola. In Pernambuco, in 1904, 909 persons died from this cause, and up to August 1, 1905, there were 2600 deaths from variola.

At the annual meeting of the New Jersey State Sanitary Association, held at Lakewood on December 8, 1905, Samuel Hopkins Adams, the journalist, delivered an address on the subject of patent medicines, in which he stated, according to the

Medical Record, that bills will be introduced in the legislatures of New Jersey and other Eastern States this winter which, if passed, will put the secret preparation out of business. Embodied in these bills are provisions compelling the makers of proprietary medicines to print upon their labels the composition and ingredients of the article, and also fixing the retail price of the preparation according to the actual worth of the ingredients. These bills, Mr. Adams declared, will be introduced by prominent legislators in each State.

It is announced that a plan to federate the forces working for national pure food legislation has been perfected as a result of the joint conference of representatives from the National Consumers' League, Federation of Women's Clubs, American Medical Association, and State Food Control officials which called on President Roosevelt in behalf of national pure food legislation recently. The plans include, says *American Medicine,* the gathering of facts about food adulteration from every source to be presented to the committees of Congress this winter. Specific instances of adulteration in brands of food which are found in one State and manufactured in another will be collected and put into the hands of Congressman Hepburn and Senators McCumber and Heyburn, who have had charge of the fight for pure food legislation in the House and Senate.

The Navy Department continues to receive recommendations in favor of having a hospital ship with the vessels of the North Atlantic fleet, says the *Army and Navy Register.* A ship of this type is available for service, being kept in ordinary at the Mare Island navy yard. There have been a number of examples of the value of such a ship during the past year, such as the epidemic of measles at Guantanamo and the outbreak of typhoid fever on the *Kearsarge* and other ships while cruising on the European station. In this latter instance it was difficult to have the officers and men suffering from such an infectious disease admitted to a hospital. It was only by the hardest kind of work on the part of the surgeons that the obstacles and prejudices were overcome and the patients admitted to treatment on land. Another consideration of importance is the transportation of the sick from a fleet as large as that which is mobilized in southern waters each winter to the naval hospital at San Juan, for instance, or from Guantanamo to Pensacola. It seems nothing less than inhuman to transport patients in tenders, tugs, or torpedo boats, where the accommodations are of the crudest sort, subjecting the sick to positive hardship.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Inhibitory and Anesthetic Properties of Magnesium Salts.

S. T. Meltzer (*Medical Record,* Dec. 16, 1905) reports the results of a number of experiments conducted by himself and John Auer during some months past at the Rockefeller Institute. Of the four main inorganic constituents of the animal body—sodium, potassium, calcium, and magnesium—the effects upon nerve and muscle of only the first three have been very carefully studied, those of magnesium for some reason having hardly been considered at all. In studying the action of various substances injected into the brain Meltzer found that magnesium produced paralysis rather than convulsions. Pursuing this lead, he found that this element with its salts invariably caused depression or inhibition of nervous and muscular action. In a few seconds after the injection of a small dose of the sulphate or the chloride of magnesium respiration ceased, and the animal would die without the struggle of asphyxia and without any sign of sensation unless artificial respiration was practiced for a long time. When injected rapidly, 0.1 of magnesium sulphate is profoundly toxic, but as much as 1.5 of the salt, if injected slowly in the course of an hour, will occasion no untoward symptoms. Herein is the probable explanation of the fact that Epsom salt, when taken in an ordinary way, produces no poisonous symptoms; some absorption doubtless occurs, but it occurs so slowly as to be harmless. In another series of experiments it was ascertained that solutions of magnesium salts applied directly to a nerve trunk caused a complete block, abolishing conduction entirely. In a third series it was found that by means of subcutaneous injection of magnesium salts complete general anesthesia, with perfect relaxation of the muscles, but without impairment of the vital reflexes, was produced. In a fourth series of experiments the magnesium salts were injected into the subarachnoid space of the spinal cord, mostly by lumbar puncture.

Monkeys were the animals experimented upon. The injection of magnesium sulphate in a dose of about 0.06 per kilo of the animal's weight caused within a minute or two complete

anesthesia and paralysis of the tail and hind legs. This discovery has been put to practical use in twelve operations performed under the influence of intraspinal injection of magnesium sulphate. The highest dose employed was 0.2 per kilo, or 15 drops of a 25-per-cent solution, for each 20 pounds of body weight. In the first eight cases some chloroform was used to supplement the effect, as the tentative doses of the salt were very small, but in the last four the magnesium alone sufficed. The best time for operating was found to be three or four hours after the spinal injection. As a precautionary measure the author insists that the Fell-O'Dwyer apparatus for artificial respiration be on hand whenever this magnesium anesthesia is employed.

Finally, Meltzer reports the cure of a case of tetanus at Roosevelt Hospital. After the employment of 115 Cc. of tetanus antitoxin without effect, the first injection of a solution of magnesium sulphate afforded great relief for thirty-six hours, and after a few more injections the patient was pronounced cured.

Cancer.

W. L. Rodman (*Journal of the American Medical Association,* Sept. 30, 1905) considers the parasitic theory of cancer as far from being proved, and also thinks that there may be some overestimation of its increase in recent times. If parasites are present, it is probable that they play a secondary part and are not the primary cause of the disease. The transmission of a cancer from one individual to another, he believes, is simply a case of successful grafting, and the rare, if not unheard of, infection of operating surgeons is also against the parasitic theory. The old theory of continued irritation of epithelial structures is still largely valid, and the minimizing of heredity has, as with tuberculosis, been carried too far. Probably more than one cause is usually operative. Comparatively little of what is written or said in regard to precancerous conditions, Rodman thinks, is based on indisputable facts. Paget's disease of the nipple, for example, is generally believed to be precancerous, but he considers the association is infrequent, and when it does occur the areolar disease is apt to be secondary. He also questions any necessary connection between phimosis and cancer. That gastric ulcer is often followed by cancer is undeniable and that cancer of the cecum frequently follows repeated appendiceal infection he has not the slightest doubt. In case of suspicious mammary tumors, prompt operation is certainly desirable, and exploration

is easy, safe, and quick. In any case a thorough operation should be prepared for as the safest course.

Three conditions of mammary cancer are too much overlooked, the author thinks: (1) The pathologic character of the growth influences the prognosis, scirrhus and encephaloid being less favorable than adenocarcinoma. (2) The age of the host, metastases being more rapid in the young. (3) The location of the growth, the inner hemisphere of the gland, on account of the danger of mediastinal infection being most dangerous and requiring most prompt operation. Rodman emphasizes the importance of complete operation in cancer, and holds that the supraclavicular glands should be explored and removed, if enlarged, in all cancers situated in the upper part of the mammary gland.

Sprained Ankle.

Robert Carothers (*Lancet-Clinic,* Dec. 2, 1905) says that no one is exempt from a sprained ankle, although some are more prone than others.

Severity in a sprained ankle will range from a trivial accident to one of extreme severity and everlasting.

The outer side more often than the inner side of the ankle is the seat of trouble.

The diagnosis, which is ordinarily made with ease, is at times made with difficulty, and at times an *x*-ray examination is required to make the diagnosis certain.

The treatment by immobilization with a plaster-of-Paris cast is unsatisfactory and at times injurious.

The treatment instituted by Cotteral, the so-called adhesive plaster strappings, advising and urging the patient to walk on the injured foot, the early removal of these straps, followed by massage, gives the most satisfactory and best results.

The old cases are to be under anesthesia, converted into acute sprains, and treated in the same manner.

Valvular Closing of the Gall-bladder After Operation.

H. E. Rockey (*Medical Record,* Dec. 2, 1905) has devised a plan of introducing the drainage-tube into the gall-bladder after cholecystotomy, which is intended to prevent the prolonged leakage of bile. The tube is inserted through the incision into the gall-bladder, which is surrounded by a purse-string suture of catgut. The edge is turned in so as to bring the peritoneal sur-

face into contact with the tube, and then a second purse-string is placed about the first. On tightening this the first suture is invaginated into the gall-bladder, and a valve is formed varying in size according to the distance between the two sutures. The drainage-tube should be fastened to the skin by anchor stitches of silkworm-gut, to prevent the tension on the purse-strings and consequent puckering of the valve. This is best done by passing a silkworm-gut stitch at either side of the tube and tying a small loop above the first knot. A similar tie and loop with silkworm-gut is made around the tube about one inch from the skin. A safety-pin is then passed through the three loops, thus holding the tubes firmly in place. A firm dressing is applied, and a bottle suspended from the bandage over the tube.

Portal Pyemia and Pylephlebitis.

W. Langdon Brown (*British Medical Journal,* Nov. 25, 1905) says that a collection of pus within the portal zone is the principal cause of portal pyemia. Ulceration of the alimentary tract is only important as being a frequent precursor of such a collection.

Signs of portal obstruction are the exception in suppurative pylephlebitis.

There are no signs by which we can distinguish with certainty cases of portal pyemia with suppurative pylephlebitis from those in which the vein is not involved.

In "adhesive pylephlebitis" the essential feature is the occlusion of the vein, and this may be produced by a variety of causes, among which sepsis is not an infrequent one.

Therefore, if our terminology is to accord with pathological conditions so far as they can be determined during life, we ought to speak of two conditions, portal pyemia and portal occlusion, remembering that we may meet with cases of portal pyemia with occlusion.

Medullary Anesthesia in Rectal Surgery.

M. Neugebauer (*British Medical Journal,* Dec. 2, 1905) publishes the results of his experience of subarachnoid injection of solution of cocaine in seventy-nine operations on the rectum and anus. It is stated that in many cases the anus becomes widely dilated and very patent after the injection, so that the lower third of the rectum is exposed to visual exploration. In other cases, although the paralysis of the sphincter is not so well

marked, two fingers can be readily passed into the gut, and internal hemorrhoids can be freely exposed. Inspection of the rectum and surgical operations above the sphincter are much facilitated by the paresis of this muscle resulting from lumbar injection of cocaine, which method, therefore, in the author's opinion, is preferable to all other anesthetic methods, whether local or general, in operations on the rectum. A case is referred to in which spinal injection proved very useful in the precise diagnosis of a bleeding internal hemorrhoid after laparotomy had been suggested for the removal of a supposed intestinal tumor. The author in concluding states that he has quite recently observed three instances of spontaneous reduction of strangulated hernia after intraspinal injection of cocaine.

MEDICINE.

The Neurasthenic States Caused by Excessive Light.

Chas. E. Woodruff (*Medical Record*, Dec. 23, 1905) first refers to the various ways in which different forms of light have been made use of for therapeutic purposes, and then goes on to explain his theory that an excess of light may be injurious, owing to the underlying law that the effect of the short waves is always destructive and never constructive. The author's view is that the various races have been provided by nature with a degree of cutaneous pigmentation suitable for the average intensity of light in the region in which they are natives. The blond, fair-skinned races are indigenous to the comparatively dark, gloomy, northern countries, whereas the inhabitants of tropical and subtropical latitudes are universally brunette. This principle is so radical that the blonds in the course of time tend to become extinct if they migrate to more sunshiny regions. By extending the process of reasoning, the author states that the excess of sunlight to which the people of many parts of this country are exposed is distinctly injurious and is a potent cause of neurasthenia. He states that, as a matter of fact, neurasthenia is commoner in blonds than brunettes, worse in cities than in the country, and is vastly benefited or cured by removal to dark, gloomy climates. The same element is of importance in the treatment of tuberculosis, and the author says that excellent results in treating the disease in this country and in Europe are obtained in sanatoria where there is a minimum of sunshine. Woodruff suggests

that a uniform system of recording complexions be adopted for the purpose of gathering statistics, and he has devised a numerical scheme of notation by using which it will be possible to secure uniformity in the records.

The Comparative Study of Various Forms of Tuberculosis.

M. P. Ravenel (*American Medicine,* Dec. 9, 1905) states that (1) the division of mammalian tubercle bacilli into two types, human and bovine, first proposed by Theobald Smith in 1898, has been amply confirmed. These types have cultural, morphologic, and tinctorial characteristics by which they may usually be recognized. The chief point of difference, however, is found in the very much greater pathogenic power of the bovine type. Bovine bacilli are, however, met which have low pathogenic power. (2) No other species of mammal has been shown to harbor a variety of tubercle bacillus so constant in its characteristics as to justify its classification as a third type. (3) Other species suffering from tuberculosis derive their infection from man or from cattle. (4) The human tubercle bacillus as a rule has a low pathogenic power for cattle, but cultures are not infrequently found which are virulent for the bovine race. (5) The bovine tubercle bacillus has the power of invading the human body and producing the lesions of tuberculosis. (6) We are at present unable to state the exact proportions of cases in which bovine tuberculosis is transmitted to man, but in view of the evidence at hand we must regard the disease in cattle as the source of a certain part of human tuberculosis, and any relaxation in our laws and precautions against bovine tuberculosis would be most unwise.

Emotional Shock and Fright as Causes of Epilepsy.

According to W. P. Spratling (*American Medicine,* Sept. 16, 1905) emotional shock and fright as causes of epilepsy do not receive the attention they should. Epilepsy may supervene immediately after the application of such a cause or be delayed for some time. The reapplication of the primary cause often induces successive attacks similar in nature. Predisposition usually exists in all such cases. In 1323 cases the author found emotional shock or fright to have been the cause in 62, equal to 5½ per cent. Of these 22 were males in a total of 814, and 40 were females in a total of 509, being 3 per cent of the former

and 8 per cent of the latter. This shows such causes to be nearly three times as active among women as among men. This greater susceptibility in women is present from childhood. During the first ten years of life there were 14 cases due to this cause among 814 males, and 15 among 519 females. After the twentieth year there was only one case in either sex. It appears from the studies in question that emotional shock or fright most often leads to epilepsy in the female sex, and that they are most apt to be active about the age of puberty.

Human and Bovine Tuberculosis.

H. Kossel (*British Medical Journal*, Dec. 2, 1905) says that by bacteriological investigation of tuberculous lesions in human beings, cattle, and swine, two types of tubercle bacilli can be detected which may provisionally be called typus humanus and typus bovinus.

The widely spread tuberculosis of cattle is to be traced exclusively to infection with tubercle of the typus bovinus.

Swine are susceptible in a high degree to the tubercle bacilli of the typus bovinus, in a lesser degree to those of the typus humanus.

The tuberculosis of human beings chiefly arises from infection with tubercle bacilli of the typus humanus, which is transmissible from man to man.

Tuberculous lesions in human beings can be produced by tubercle bacilli of the typus bovinus.

Tubercle bacilli of the typus bovinus can be transmitted to human beings by food derived from tuberculous animals, especially by milk of cows affected with tuberculosis of the udder.

The part played by infection from bovine sources in spreading tuberculosis in man is small in comparison to the danger threatened from a consumptive human being.

Researches on Spirochaeta Pallida.

F. Schaudinn (*Deutsche med. Wochenschrift*, 42, 1905) states that the spirochaeta pallida is the only spirochaeta which is flagellated either at one or both ends. In one specimen he discovered two flagella at one end and one at the other. As a method of staining he uses that of Loeffler for bacteria. Schaudinn suggests that it is a new genus, and proposes the name of "Spironema" for it.

THERAPEUTICS

The Treatment of Tuberculosis.

A. Jacobi (*American Medicine,* Dec. 23, 1905) says the treatment of tuberculosis should be hygienic, dietetic, and medicinal. Pure air and good food and enough of it are indispensable. That is what sanatoria are erected for. But their number is small compared with the vast number of cases of incipient and advanced tuberculosis. It is mainly the latter that disseminate and propagate the disease; it is these patients who should be taken care of at public expense in behalf of the protection of the public at large. Removal from the airless and lightless dwellings of large cities is, when possible, a necessity. Young men with no family depending on them should be advised to go south or southwest and to make a living there. Advanced cases, and those patients unable to find work, amongst the poor, should not be told they must leave. They have not the means to travel or live in "Colorado," "Denver," "the mountains," and to tell them, as it is done too often, their case is hopeless unless they change climate immediately is reckless and cruel, and unworthy of a physician not deprived of conscience and humanitarian instinct. A poor consumptive, when about to die, should rather die amongst his own than in the streets or in the attics of a strange town thousand of miles away. Even the tuberculous and the consumptive patients (the terms are not synonymous by any means) may be benefited at home. Cod-liver oil is probably active beyond its effect as a fat. Arsenic is a good tissue-builder and may be given in moderate doses (the trioxid-arsenous acid) for many months in succession. It has been considered as a "nutritive" for generations. Cardiac stimulants should be taken regularly for indefinite periods: for instance, digitalis, the equivalent of 3, 4, or 5 grains of the herb daily, divided into three or four doses—no "cumulation" need be feared —or sparteine sulphate 2 to 5 grains daily (which is easily borne and readily eliminated). For fifteen years past guaiacol has been given by the author in thousands of cases, with good results. Expectoration becomes more mucous, cough looser, and weight increases. These effects are obtained in the average cases amongst the poor, and treatment with guaiacol should not be neglected by the rich, and by the sanatoria, which should add medication to their hygienic and dietetic (and gentle gymnastic) and cautious hydropathic treatment.

Max Scholler, who introduced guaiacol into the treatment of tuberculosis forty-five years ago, employs it also in tuberculosis of the bones and joints, internally, and with iodoform and glycerin in injections. Lately he published two bad cases of renal tuberculosis which got well under protracted guaiacol treatment without an operation. The author never relies on local treatment alone in chronic osteitis and arthritis.

Action of the Roentgen Rays upon the Blood.

Roger S. Morris (*American Medicine,* Dec. 2, 1905) studied the more immediate effects of moderately long exposures (3 to 5 hours) to the Roentgen rays upon the blood of rabbits and rats. After reviewing the work of previous experimenters and detailing his own results, he arrives at the following conclusions: (1) The Roentgen rays cause a marked diminution in the absolute number of leucocytes in the peripheral circulation. (2) Preceding the leucopenia there may be a moderate rise in the number of leucocytes 8 to 12 hours after the exposure, the increase being due largely to the greater number of polynuclears. (3) The lymphocytes are especially susceptible to the action of the rays. (4) Alterations in the histologic characters of the lymphocytes and polynuclear amphophiles may be found in the rabbit similar to those described in the lymphoid tissue and bone marrow. (5) The harder the tube the more pronounced the changes produced. (6) No changes in the red blood cells or hemoglobin take place within the first few hours following moderately long exposures.

The Action of Saline Injections.

V. Lombard (*British Medical Journal,* Dec. 2, 1905) has tested the prophylactic and therapeutic action of saline injections upon guinea-pigs which were treated with intraperitoneal inoculations of typhoid and cholera organisms. The saline solution employed consisted of 0.5 per cent NaCl and 1 per cent NaSO dissolved in distilled water. The solutions were injected sometimes intraperitoneally and sometimes subcutaneously. The author found that they contributed to the development within the organism, particularly in the peritoneum, of a leucocytosis and a phagocytosis, which retarded the development of the virus and in some cases destroyed it. These saline injections contributed,

therefore, to the prolongation of life, and in some cases enabled the animals to survive the infection. Prophylactic injection, administered twenty-four hours before the virus was inoculated, enabled guinea-pigs to resist a dose from two to three times as large as that which proved fatal to the controls.

The Imperative Treatment of Urinary Retention.

Joseph B. Bissel (*International Journal of Surgery,* December, 1905) says that suprapubic aspiration affords almost instantaneous relief in an exceedingly serious condition.

It is at times absolutely indicated. There is no alternative measure which can be substituted for it.

It is harmless when skilfully performed, and is always available.

It can be carried out for days, if necessary, without danger and with little or no pain.

It is a valuable preparatory measure for the major operation.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

A Study of Failures in Ophthalmic Practice.

George M. Gould (*Medical Record,* Sept. 30, 1905) sets forth the details of fifteen reasons for failures to relieve the common systemic results or reflexes of eye-strain: (1) The want of a single good refraction school in the world. Instead of ophthalmology being, as Helmholz said, the most accurate and scientific of the departments of medicine, he thinks it the most inaccurate and unscientific; and this is due to the lack of systematic and adequate training in the difficult art of refraction. (2) Bad case-recording, omitting the life history of the patient's ailments, or "the biographic clinic," leaves the cure or non-cure unknown or indefinite. (3) The inexperience, ignorance, or impertinence of the optician, incapable of doing his proper work, and aspiring to be an oculist, also prevents good results. (4) Changes in the patient's refraction not followed by retesting and changes in glasses are another source of failure. (5) Incorrect diagnosis of ametropia is the most frequent cause of failure. (6) The

presence of head tilting often causes an inexact placing of the axis of astigmatism. (7) The morbid writing posture, coupled with its result, lateral spinal curvature, continues the consequence of eye-strain. (8) Non-allowance for the patient's personal equation may frequently account for non-success. (9) Tenotomy for heterophoria does not cure the cause of the heterophoria, which is ametropia. (10) Ascription of the morbid symptoms to general disease will not end in cure if they are due to neglected eye-strain. (11) Subnormal accommodation is far more frequently present than is suspected, and distance correction of the ametropia alone will not give relief. (12) "Hysteria," often caused by eye-strain, may persist when chronic, although the eye-strain has been neutralized. (13) Patients living at a distance because they cannot be watched closely are likely to prove "failures." (14) Despair of curing in an obstinate case may lead to too speedy renunciation of effort. (15) The secondary results of long-continued eye-strain may be too chronic or deep-seated to cure at once or to cure at all. Despite all these reasons, however, it is contended that in no department of medicine are the cures so near 100 per cent, so speedy, or so gratifying as in skilled refraction work.

Gonorrheal Inflammations.

S. M. Burnett (*Journal of the American Medical Association,* Dec. 23, 1905) remarks that while gonorrheal iritis has long been recognized by ophthalmologists, it is a singular fact that it is almost entirely ignored in the treatises on genito-urinary diseases with the exception of two American text-books. Opinions differ as to its frequency, some authors holding it to be extremely rare, while others consider it rather common. It seems from his own experience to be rare in Washington, even in a class, the negroes, in which gonorrhea is most rife. It may appear under various forms; the so-called spongy iritis, usually one of the rarest types, is met here, he thinks, with greater comparative frequency than the other forms. Another distinctive feature is its tendency to recur during the same or subsequent attacks of gonorrhea. Like gonorrheal rheumatism, it almost invariably appears in the declining stage of the disease, and one or both eyes may be affected. The importance of an early correct diagnosis for proper treatment is obvious, as a delay of a few days or even of a few hours may mark the line between the

preservation of good vision and partial or complete blindness. An illustrative case is reported.

Burnett also gives the account of a case of conjunctivitis occurring in connection with gonorrhea, which he considers an instance of the rare indigenous infection by gonorrheal toxins, as careful examination of the purulent discharge revealed only pure muco-pus. This case suggests to him the importance of bacteriologic examination in every case of purulent conjunctivitis occurring in gonorrheic patients. If no gonococci are found the prognosis is materially modified as compared with cases in which they are present. No author, so far as he has observed, has mentioned the pronounced mucopurulent type of conjunctivitis from endogenous gonorrheal toxin infection seen in the case here described.

The Treatment of Gonorrheal Ophthalmia by the Organic Salts of Silver.

At a recent meeting of the Paris Academy of Medicine M. Darier (*Lancet,* Nov. 18, 1905) reminded his audience that the classic treatment of gonorrheal ophthalmia consists in cauterizing the conjunctiva with nitrate of silver. This procedure no doubt rapidly dries up the suppuration, but it also destroys the conjunctival epithelium and increases induration in tissues which are already edematous. Sometimes it is attempted to reduce the infiltrations of the tissues by means of iced compresses, with results which are more harmful than useful. The real object of treatment is to reduce the induration of the tissues, and M. Darier treats his cases as follows: Every morning and evening during a space of one or two hours, at an interval of from twenty to thirty minutes, from three to four drops of a 25-per-cent solution of argyrol is instilled into the eye, the eyelids being held so as to make a kind of bath for the conjunctiva and the fluid being retained as long as possible. This argyrol bath is in no way painful, but relieves the patient in a very real fashion. Besides the instillation of a 25-per-cent solution, others of a 10-per-cent solution are used day and night every half-hour. At the end of fifteen days the secretion has most likely ceased, but the conjunctiva is still rough. In from five to six weeks, however, everything is normal. After eight years' trial M. Darier has come to the conclusion that although the organic salts of silver apparently have less bactericidal power than the nitrate, yet they are surer in action owing to their superior powers of

penetration and their being harmless to the tissues. They may be applied almost continuously, and in strengths of even 28 or 50 per cent.

GYNECOLOGY AND OBSTETRICS.

Inversion of the Uterus.

L. V. Friedman (*Journal of the American Medical Association,* Dec. 23, 1905) describes the types of uterine inversion, and suggests the use of the term "initial" instead of "partial" for the cases in which the fundus has not passed the internal os, reserving the latter term for those cases in which the os has been passed but the uterine cavity is not yet obliterated. He thinks the condition is probably much more frequent than is indicated by the oft-published statistics of Denham and v. Braun, and that the mortality is higher than Winckel's figure of 22 per cent in 54 cases. The prognosis of acute cases will probably always be grave, in spite of the ease of immediate reposition; shock or sudden overwhelming hemorrhages are possibilities to be feared. A certain number of cases are probably unrecognized, and these may affect the mortality statistics. A diagnosis is often very difficult, and in no other condition is an error more dangerous to the patient. Inversion may occur after labor without pain, hemorrhage, or pronounced shock, and the favorable time for replacing may have elapsed before the attendant is aware of the complication. While in acute inversion immediate reposition is usually advisable, Friedman in case of severe shock, provided the hemorrhage can be controlled, would defer manipulation. Leaving an adherent placenta until after reposition has, he says, many objections; its removal is then more difficult and it adds to the bulk to be replaced.

The writer describes the use of taxis, and also the vaginal (Spinelli's) operation and the abdominal methods of reposition. The objections to the vaginal method (complete anterior colpohysterotomy with replacement of the uterus after incision) are the danger of infection, the risk of injury to the tubes and ligaments and even to the bowels, the resulting adhesions, and the possibility of the rupture of a uterine scar in a later pregnancy. He believes that with the progress of surgery the method by abdominal section and intra-abdominal dilatation of the cervical ring will yet give better results than the vaginal operation, though at present the statistics are not nearly so favorable. He gives

the details of the operation, and reports two patients thus operated on successfully by himself shortly after delivery, attempts at taxis having failed. If this operation can be perfected so as to insure invariably mechanical success, he believes that it will be an ideal procedure for reposition of the inverted uterus without injuring its peritoneal investment. It also permits inspection of the tubes, which in some cases may require resection.

Puerperal Infections.

R. W. Holmes (*New York Medical Journal*, Dec. 9, 1905) says that practically the battle against puerperal infection is won by an adequate system of asepsis and antisepsis. True autoinfections very rarely arise and usually are not of serious portent.

It is no more possible to operate aseptically without skilled assistants in obstetrics than in general surgery; to properly conduct an operative case requires a full quota of assistants.

Puerperal infection is not a specific disease. Diverse types of microörganisms may be the etiological factors, and any part of the parturient canal may be the seat of the infection.

To treat locally a thermal condition of the puerperium without a clear, positive knowledge of the seat of infection should be characterized as an obstetric crime.

At the present time there is absolutely no method of adequately reaching the offending germs in the uterine submucosa or muscularis. The curette cannot discern the locality of the retained remnants of secundines; the finger alone can ascertain this; a placental forceps more easily, more certainly, and with infinitely greater safety can remove them, under guidance of the finger.

It is a grave error to neglect digital revision of the uterus after any instrumentation for the purpose of cleaning the uterine cavity.

Nature, by supplying the reaction zone of Bumm, offers the surest safeguard to the woman; puerperal infections demand the same rest for the uterus as inflamed parts elsewhere require rest.

The danger of shreds in the uterus is greatly overestimated as regards their rôle in infections.

Active operative measures endanger the life of the woman doubly or trebly to the extent the expectant plan does.

The use of saline purges, and the administration of ergot, hydrastis, etc., remove much of the danger or necessity for active

therapy; in a day or two the danger is often past, for, like a baby, the lying-in woman is subject to evanescent febrile elevations.

The Results of Operation for Recurrent Uterine Cancer.

V. Rosthorn (*British Gynecological Journal,* November, 1905) at the recent meeting of the German Gynecological Society said that to obtain better results it would be important to study the various kinds of primary tumor, which differ very widely. He showed a carcinoma of the posterior lip of the portio in quite an early stage, yet the corpus uteri was studded with cancerous nodules and all the glands involved; on the other hand, he has operated, by the help of Schuchardt's incision, on a case of far-advanced cervical carcinoma in which no glands were involved, which died some considerable time afterward from peritoneal tuberculosis. Weight must be attached to the form and extension of the disease, and the recurrences themselves should be studied in their early stages. There is a great difference between recurrences in the connective tissue and in the lymphatic glands. Operation on the former is not invariably difficult, at any rate is not hopeless; lymphatic gland recurrences, on the other hand, are serious, and moreover generally fatal. The abdominal method should generally be chosen for operating on recurrent cancer. Most of such recurrences are local, and the extirpated glands have been free from disease. He had three cases of local recurrence which remained well. The topography of the growth and not its size will determine the technique to be adopted.

Torsion of the Pedicle of an Ovarian Dermoid Cyst.

P. Lepage (*British Gynecological Journal,* 1905) reports a case of torsion of the pedicle of a dermoid cyst of the left ovary in a woman three and a half months pregnant, to show the importance of exact and systematic examination of pregnant women, even in the earlier months of gestation. The diagnosis and operative interference would not have been so long delayed if the anamnesis and previous examination by the physician in attendance had not led to mistakes. The cyst, however, was removed, and in spite of peritonitis having begun the result of the operation was good and pregnancy continued to term.

Repeated Ectopic Gestation in the Same Side.

W. Hofmeier (*Berliner klin. Woch.*, No. 27, 1905) reports a personal observation of a woman, aged twenty-eight, who was twice pregnant in the left tube. On the first occasion the sac was removed by operation, but the second time the ovum developed in the remnant of the tube which had been left behind.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Copper Salts in Actinomycosis and Blastomycosis.

In this paper, which he calls a preliminary report, A. D. Bevan (*Journal of the American Medical Association*, Nov. 11, 1905) remarks that while iodide of potassium has a very definite and positive effect on circumscribed lesions of actinomycosis, a very large proportion of the cases of abdominal and lung infection are fatal, in spite of the treatment. He has been looking, therefore, for some other method of treatment, and the well known action of copper salts on vegetable parasites suggested their employment. Of these the most powerful is the sulphate, which the French investigators have shown can be taken in doses from 2 to 8 grains a day for a long period without deleterious results. He has used it in several cases in doses of from one-quarter to one-half grain, in some cases increasing it to one grain three times a day, also employing irrigation with a one-per-cent solution. The results seemed so satisfactory that he has also used it in two cases of blastomycosis, the skin lesions of which are likewise benefited by iodide of potassium, especially in conjunction with the *x*-ray. A case of each of the two diseases thus treated with good results is reported. The treatment seems to him to be a logical one, and he thinks that collective further experimentation should be undertaken to determine the value of copper as a cure for these conditions. It is possible that, as in syphilis, a mixed treatment, using both copper and the iodides, would be most effective in some cases.

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ORIGINAL CONTRIBUTIONS.

POISONOUS PLANTS.

BY E. S. MC KEE, M.D., CINCINNATI.

Rhus Toxicodendron is known as poison-ivy or poison-oak. Poison-ivy has but three leaflets; Virginia creeper and American ivy, with which it is frequently confused, have five. There are about fifty varieties of poisonous plants in America, but there is no general rule by which all may be recognized. The characteristics which generally though not always accompany poisonous plants are the peculiar lurid purple color seen on the stems of the castor oil, conium, cicuta, pokeberry, and dogbane. A narcotic odor is common to many, but not all. An acrid taste is probably the most common and best safeguard we possess. Milky-juiced plants may be regarded with suspicion. Rhus toxicodendron has very wisely been dropped from the new United States Pharmacopœia. *Rhus radicans* has been termed the poison-ivy, and *Rhus diversiloba* the poison-oak. There is considerable difference of opinion among botanists as to whether Linne's *Rhus Toxicodendron* is identical with his *Rhus radicans*.

Experientia docet. I always feel that I know a little more about a disease that I have had myself. Having had it twice I feel that I should be allowed to speak somewhat *ex cathedra*. I well remember when the coal-tar products came first into general use: I was taking a dose to be frequently repeated for a temperature of 104°. The fever soon vanished, and the powders became very depressant. I felt that another powder if taken as directed would finish me. I stopped the powder and rallied. I can feel that sensation yet. It fixed in my mind more plainly the use and abuse of the coal-tar products than any amount of reading or lecturing. This experience has doubtless saved me some patients since then.

While visiting the Santa Cruz grove of big trees in Cali-

fornia in 1897 I contracted poisoning from poison-oak. It came out beautifully in San Francisco, and caused me much misery while going through the hot Sacramento valley. My first relief was bathing in the water of the soda springs of Mt. Shasta. A plunge and a swim in the hot lake at Mammoth Hot Springs, Yellowstone Park, resulted in complete and permanent relief. The waters of these hot springs are impregnated with silicate of magnesia, which did the work. This case is noteworthy principally from the novelty and variety of its treatment.

Last summer I was called one night to a suburb of Cincinnati called Sedamsville, accent on the second syllable. Returning through a yard I ran into a fine specimen of the *Rhus diversiloba,* catching hold of it with my hands. The next morning the eruption appeared, and the second morning both my eyes disappeared. Over the greater part of my body—wherever my hands had touched me in the agony of itching during the night—were the little double blisters, burning like fire. I had no rest except under drugs for a week, and not much for three weeks. The relentless burning and itching put me about as near the crazy line as I care to get. My hands seemed poison, and wherever they touched me the disease was spread or aggravated. Weak phenol lotions and salves gave temporary relief, as did also solutions of borax. Lotio plumbi et opii gave more relief than anything thus far. Powdering the whole body with rice powder gave more relief than anything which had preceded it, and lasted for five or six hours. Burrows's solution—sol. sat. alumini et plumbi acet.—a tablespoonful in a pint of water, and used as a lotion, did not give the relief expected. Frantic efforts to get the poison off the hands developed the fact that a heavy lather of soap gave partial relief, and the more ordinary the soap the more extraordinary the relief. Alcohol gave ease, but the usual strength was too strong and added but fuel to the fire. I found the following the most useful in stopping the burning and itching and checking the spread of the disease: ℞ Alcoholis 53.00, aquæ destillatæ 17.00, plumbi acetatis q. s., ut fiat solut. sat.; M., apply. This would give relief for six or eight hours.

Pfaff, of Harvard, has discovered toxicodendrol, the poisonous substance, an alcohol-soluble fat, resembling croton oil. Alkalies to a certain extent saponify the fat, and to that degree destroy its activity. Were I poisoned again I would as soon as possible wash my hands repeatedly in the alcohol dilutum of the U. S. P. to dissolve and remove the poison. If I reached the

alcohol within an hour or two I think the disease would be stopped. I would then apply wherever the vesicles had appeared the saturated solution of the lead acetate in the dilute alcohol previously mentioned. This gives more complete and prolonged relief and does more toward abridging the course of the disease than anything else.

Among the many remedies authorities on the subject mention the following: Saturated solutions sodium bicarbonate, sodium biborate, potassium bitartrate, potassium iodide, solution chlorinated soda (Labarraque's solution), to be applied in half strength on the clothing; sodium hyposulphite 12.5 per cent, solution lead subacetate 25 per cent, phenol 1, 2, 3, or 5 per cent in water or petrolatum, the official linimentum calcis with or without 3 to 5 per cent phenol-aristol in powder or ointment.

The nervous symptoms formed a very distressing part of the disease. For a couple of weeks seeing one patient would put me to bed exhausted. Making out a bill would have the same effect. I would go to sleep from sheer exhaustion on a street-car. I could hardly write my name or think. I found great relief in tumbling into bed after every effort, and became very expert at it. Bromide of sodium 2.00 three to six times a day quieted my nervous symptoms. Two drops of Fowler's solution was added to each dose to prevent acne bromata. This condition gradually disappeared, and when natural sleep returned my nerves soon regained their normal state.

The greater part of my skin exfoliated, and the new skin, especially on the ears, was for some weeks very tender and sensitive, itching on the slightest provocation, though nothing was visible to cause the itching. Flannel or wool next the skin was excessively irritating. I found it necessary to anoint the newly forming epidermis frequently with olive oil or mixtures containing adeps lanæ to aid in its growth and to protect it from irritation.

Legal measures for the prevention of this trouble by the eradication of the plants should be taken, especially in thickly settled communities. Immune persons, of whom there are many, should be employed to complete this destruction. This can be done mechanically by uprooting, or better by the application of sulphuric acid, 2 Cc., to the stems every two weeks till the plants are killed. The brush should not be left on the ground nor the wood used as fuel, for the poison is found in the wood long after dead, and even in the smoke. Indeed, there are per-

sons who cannot pass to the windward of these bushes without suffering from their venom. Others can handle them with impunity and even inject the poison under the skin without suffering any inconvenience. It is possible, though not probable, to transfer the poison by the clothes, towels, or persons affected, or by handling the plants. Immunes when handling the plants should wash with alcohol to avoid carrying it to others.

SANATORIUM TREATMENT OF TUBERCULOSIS IN COLORADO.[1]

BY G. W. HOLDEN, M.D., DENVER, COLORADO.

(Continued from page 49.)

The method of admission of patients to the Agnes Memorial is similar to that adopted by other closed sanatoria. The family history, personal history, a careful outline of symptoms, and the result of the medical examination are recorded. All pulmonary and laryngeal findings are diagrammed. Examinations of blood, sputum, and urine are made soon after arrival.

The patient is furnished with verbal and written instructions for his daily routine. He is cautioned in regard to his personal hygiene and the disposition of his sputum. His written instructions are made out on printed forms, regulating his rest, exercise, recreation, and meals. Each case is made a special object of study, and instruction is given accordingly.

The average patient's daily life is as follows: If he requires it, beef juice or a glass of hot milk is brought to him by a nurse before rising in the morning. The rising hour is seven, when he takes a cold sponge, needle, or shower bath, followed by a brisk friction rub, after which he is ready for the eight o'clock breakfast.

After breakfast he returns to his porch and enjoys an hour of quiet rest in the open air, either on his bed or reclining chair, in a recumbent position. During this time the physicians make their rounds, visiting each patient. From 10 to 11 A.M. is the exercise hour, when the patients take their prescribed exercise, returning to the administration building at 11 o'clock for recreation hour, and in the case of those requiring it, for lunches of raw eggs, milk, or beef juice. The recreation hour is from 11 to 12, and during this time the patients are allowed to play games,

[1]Read before the Chicago Medical Society, Nov. 29, 1905.

such as croquet, cards, pool, checkers, etc., either out-of-doors, on the porches, or in the sun parlors. Twelve to one is a rest hour for all patients, and this hour finds them on their beds in the open air, weather permitting, the only excuse for remaining in their rooms being a severe dust, rain, snow, or wind storm.

Dinner is served at 1 P.M., after which they return to their porches and remain until 3 P.M., when again they are allowed to exercise. From 5 to 6 P.M. is another general rest hour on the bed. During this hour the physicians again make their rounds, visiting each patient. Supper is served at 6 P.M. After supper until the retiring hour the patients are allowed recreation on the porches, or in the sun rooms. During this time they also have free access to the well equipped library. Upon retiring to their rooms, after taking their cold sponge baths, or rubs, they are ready for bed. At this time the night nurse brings to those requiring it hot milk or raw eggs. The general retiring hour is 9 P.M. in the winter and 9.30 in the summer months.

Patients are encouraged to engage temperately in such light work as needlework, crocheting, painting, and a moderate amount of study, as a mind occupied conduces to contentment. Right here I want to say that the condition of the mind has an immense influence on the well-being and progress of the tubercular patient.

Besides the daily programme as outlined, there are the daily treatments of the nose and throat cases, monthly physical examinations, blood, sputum, and urine examinations in the laboratory, also the weekly instructions and weighing.

A careful record of all cases is kept from the time of admission until discharge. Temperature, pulse, and respiration are recorded from time of entrance until they become normal.

I should like to call attention to what I consider the four corner-stones upon which rests the success of an institution for the treatment of tuberculosis, viz., good food, fresh air, rest, and discipline. I put them in the order of their value, but I lay great emphasis upon the last named—discipline.

"As the healing of a tubercular process is largely dependent upon the state of nutrition, the question of diet becomes of the very first importance." Thus Dr. Osler expresses the necessity of furnishing the patient the most nourishing food possible. It has been proven that in the blood of tubercular patients there is a diminished number of red cells, a lower percentage of hemoglobin, and a decrease in alkalinity.

Unless we furnish the patient with blood-producing food,

we cannot expect this depleted carrier of nutrition to supply the demand made upon it by the constant breaking-down process going on at the seat of tubercular involvement. Our first aim must be to increase the number of red blood-corpuscles, for theirs is the function of carrying the life-giving element, and we recognize the value of certain foods over others as tissue-builders. Therefore we must regulate our diet accordingly, and exercise great care in the selection and preparation of the food. It should be simply prepared and made appetizing, with enough variety to prevent its becoming monotonous. Our main dependence is upon milk and its products, eggs, meat, vegetables, cereals, bread, and fruit. It is not necessary for me to enter into a discussion of these foods, as every work on dietetics covers the ground in detail. I have found, however, that a generous mixed diet is all that the average tubercular patient requires. For those with disordered digestion it is necessary to limit the diet, making a special study of the individual case. In spite of all that has been urged in favor of forced feeding, my best results have been obtained from three regular meals a day. At one time I made a test, putting half my patients on the three-meal system. For the remainder I prescribed three very large meals with lunches between, of course paying due attention to their eliminative organs, and I found that those patients taking only three meals a day made much more satisfactory progress in every respect, having fewer digestive disturbances and less discomfort, coming to their meals with an excellent appetite, which was the exception in the case of the others.

To overwork an already weakened digestive apparatus is to retard the progress of the patient.

Under the open-air treatment the powers of assimilation improve, and the increasing appetite, gratified by a proper diet, brings with it increasing strength and health. Overindulgence in fresh air for the tubercular patient is not possible—fresh air is his salvation. So much is being constantly written on this subject that I shall merely call attention to a few precautions to be taken. Those not accustomed to an open-air life find it a little trying at first, and must be gradually hardened to it. Our method with a patient who comes to us with the idea that fresh air, and especially night air, is harmful is to disillusion him at once. At first he is requested to open his large window and outside transom. After a few nights spent in this way the wide door is opened, and this practically opens the porch side of the room. Next the door and transom leading into the wide corri-

dor are opened. This gives him a free circulation of air, for the large doors at either end of the corridor are always open. It is seldom necessary, after such a preparation, to request the patient to sleep on his porch; he himself requests the privilege of doing so, and after having enjoyed the exhilarating effect of a few nights out-of-doors he resents being ordered inside to sleep.

It is necessary to dress according to the season, weather, and time of day. During the warmer months there is very little difficulty in protecting patients, but during the winter months the question of clothing calls for a careful selection, and the bed-clothing should be sufficient to assure warmth through the entire night.

The patients should dress and undress in a warm room, and never get into a cold bed. The sheets can be heated by an electric pad, or by moving a hot-water bag between them, afterward leaving it at the foot of the bed for a foot-warmer; but woolen blankets are much more satisfactory than sheets for extreme weather. A head protector of some sort is essential for winter nights. On cold days the patient should not neglect to wrap himself well in a blanket, whether on his bed or in his rest chair, with heat at the feet, if necessary, for with warm feet he will not feel the cold.

It is recognized that rest is one of the most important factors in retarding tissue change, and in rendering the individual less susceptible to the growth of the tubercle bacillus. Therefore it is of the utmost importance that the patient be kept quiet until such time as exertion can be taken without producing temperature, or an increased pulse rate. An afternoon temperature of 100° or over calls for absolute rest in the recumbent position until it subsides, even though it may be a matter of days or weeks. A great advantage of the rest cure is that the tendency to hemorrhage is markedly reduced. While a large proportion of our patients come to us with histories of numerous hemorrhages, during the period of a year and a half since the institution opened, under enforced rest not more than half a dozen cases have developed hemorrhages, and in two cases only was the hemorrhage severe. In both of these cases anatomical conditions were such that large hemorrhages were unavoidable, vessels of considerable size in conjunction with cavities being eroded.

Once having overcome the patient's temperature, and all other conditions being favorable, the question of exercise arises. Exercise stimulates the appetite, increases the activity of the eliminative organs, aids expectoration, and improves the morale

of the patient, but in regulating it great caution is necessary. No other exercise is as beneficial to the tubercular patient as walking. He should begin with a few rods, gradually extending his walk until he is able to cover several miles a day without fatigue. The fact that he should never allow himself to become fatigued should be well impressed upon him. Many lose sight of this fact, and walk until they feel tired, realizing too late that they have insufficient strength for the return journey. One such mistake will often undo what it has taken weeks to accomplish. Our patients are instructed to walk slowly, breathing through the nose, and to do very little talking, making it a point to sit down and rest before returning to the institution.

As I have already stated, patients at the Agnes Memorial are required to observe a general rest hour before dinner and one before supper, during which time they are not permitted to read or to converse. This relaxation puts the digestive organs in better condition to do the work required, and the patient goes to meals with a good appetite. Again, *after* each meal they rest, to facilitate assimilation.

It is recognized by medical men that the life of the tubercular patient in his own home is largely regulated by his own inclinations and caprices, irrespective of the instructions given him by his physician. The regularity of meals and character of the food, the amount of exercise and when to take it, the necessity of taking a sufficient amount of rest and of retiring early, the care of the sputum, and the protection of others, personal hygiene, and baths—none of these instructions can be carried out systematically or successfully outside an institution. This requires close observation and firmness and unremitting effort on the part of those in charge of a tubercular patient. It cannot be successfully managed in the home, even though a competent trained nurse be installed, because of the interference of friends not familiar with the necessity of strict observance of the minute details, and it is impossible for the physician during a short office consultation, or a visit to the home, to lay down rules necessary to govern the patient and expect him to remember them all. He will grasp only one or two, putting his own interpretation upon them, and overlooking others equally as important, perhaps thinking them of too trivial a nature to be remembered. In an institution the patient's daily programme is outlined for him, and there are no outside influences to divert him from carrying it out. He is always under close observation by persons whose duty it is to see that he obeys his instructions. How much of all this can a busy physician in general practice supply?

Before passing to a statement of results I wish to touch upon the objects of a sanatorium, especially of the Agnes Memorial. The first aim of any institution should be to restore to a life of usefulness those who are afflicted with this disease. A most important object is the education of those reached directly and indirectly by the work of such an institution. This is an ever-widening circle of influence.

Another is the opportunity for close observation, study, and original research. The paramount object of this sanatorium is to reach those individuals of moderate means who are stricken down in the occupations of active life, and to restore them to their position as useful members of society.

As to our results, my basis for classification is that recommended by the committee of the National Association for the Study and Prevention of Tuberculosis. To the best of my ability I have made accuracy in conforming to this my only consideration. Time is needed to show the value of this classification as a working basis. My report covers but one year, the first of the institution's existence.

During this year 224 patients were admitted, 107 discharged, 8 dismissed for non-observance of rules; 13 remained less than one month. The basis of my report will be upon 102 cases whose average stay was from six to eight months. Of these 102 cases, 13 were discharged apparently cured; 28 arrested; 43 improved; 16 unimproved, with progressive disease; 2 died.

With our present knowledge and means at command in the treatment of tuberculosis, and taking into consideration the limited stay at the sanatorium, six to eight months, it must naturally follow that the number of patients discharged as cured is relatively small. Further, these patients should be classified as "apparently cured" until it has been demonstrated that they are fitted to endure the ordinary stress of life without recurrence of the disease. From three to five years should elapse before a case is pronounced cured.

Owing to necessity, the character of cases accepted was not such as I should have chosen, had the end in view been only the showing of excellent results, but one of the main objects of sanatorium treatment is education, and this we have ever kept in view. Patients who have had the advantage of a six-months' stay in a properly conducted sanatorium become enthusiastic converts to its methods, and after leaving it do an incalculable amount of good as missionaries of the doctrine of right living.

The cases upon which my report is based fall into three

classes—the incipient or favorable cases, the moderately advanced, and the far-advanced. Of the incipient cases, 64.70 per cent were discharged apparently cured; 17.65 per cent were arrested; 17.65 per cent were improved. In none did the disease progress, and none died.

Of the cases moderately advanced, 4.65 per cent were discharged, apparently cured; 39.54 per cent were arrested; 46.50 per cent were improved; in 9.30 per cent the disease was progressive; none died.

Of the far-advanced cases, none were cured; 19.05 per cent were arrested; 47.62 per cent were improved; in 38.57 per cent the disease was progressive; 4.76 per cent died.

Upon a comparison of our work with that of other institutions our showing is good. These results were obtained under the unfavorable conditions of opening a new institution, with all its attendant labors and difficulties.

I have previously spoken of my conclusion that forced feeding was not essential nor desirable to obtain results. I prefer to depend upon an abundance of good food served in the three regular meals, in conjunction with the careful regulation of the life of the patient. Of course, constant attention is paid to assimilation and elimination. My results from such a course are these:

Of the incipient cases, 17 gained 132 pounds, an average of 7¾ pounds. This is a small gain for each case, but the majority of incipient cases are not emaciated. Of the cases moderately advanced, 38 gained 432 pounds, an average gain of 11 1/3 pounds. Of course, in exceptional cases, exceptional gains were made; I give only an average. Of these cases, 5 lost 16¾ pounds, an average of 3 1/3 pounds. Commenting on this, my experience shows me that when a patient is near his average weight the gain or loss is not always an index of the pulmonary condition; and, after all, the lung condition is the vital matter.

Of the far-advanced cases, 29 gained 288 pounds, an average of 10 pounds; notwithstanding this gain their pulmonary findings placed them in this class; 13 lost 53¾ pounds, an average of 4 pounds, plus.

It does not lie within the province of this paper to touch upon the many problems confronting the phthisiologist—prophylaxis, municipal regulations, State sanatoria, the consideration of immunity, with the many fields of research opened through this latter, fields full of interest and full of promise; in all of this we hope to have our share.

My purpose has been to give an idea of what we are doing at the Agnes Memorial Sanatorium, a work which has been made possible through the philanthropy and public spirit of Mr. Lawrence C. Phipps.

RHEUMATOID ARTHRITIS IN A BOY OF ELEVEN YEARS.[1]

BY CHARLES F. EIKENBARY, M.D., CHICAGO.

This boy is eleven years of age, the fourth of nine children. All of them were healthy. Two have had whooping-cough. The family history is negative, aside from the fact that the mother has had a number of miscarriages. The boy was quite well until seven years of age, at which time he fell and hurt his left hip. He did not complain of it at the time, and evidently had very little pain. He did not limp very much. In the course of a few weeks he began limping and complained of pain in the region of the left hip. It was swollen, and the mother says the swelling continued for a week or so, when it suddenly left the hip, and swelling appeared in other joints. First it would appear in one joint, then in another, or in a number of joints at the same time. He was confined to bed during this period. The pain was very severe, so that the mother could not touch the boy without causing him to scream. He had a high fever. The joints were not only swollen, but had a glazed appearance. They never suppurated. From what the mother tells me, it would seem like a case of acute articular rheumatism. Every year since then he has been confined to bed, during a part of the year, with pains in various joints, somewhat like those he had before, only they were not so severe. She says at one time the boy's urine contained a considerable amount of blood, but it does not contain any blood now.

The boy presents a rather remarkable condition. Both wrists are rigidly ankylosed; the first and second phalangeal joints of the index-finger are ankylosed; also the first and second joints of the middle finger, the terminal joint of the ring finger, and the first joint of the little finger. All of them are flexed. Both the metacarpophalangeal joints and the terminal joint of the thumb are ankylosed. All of these joints are flexed. There is rigid ankylosis of these joints, with flexion deformity. The ankylosis is not so extensive in the joints of the left as in the right hand. The elbows are rigidly ankylosed at right angles.

[1]Read before the Chicago Orthopedic Society.

There is absolutely no motion in these joints. They appear to be slightly enlarged. The shoulder-joints are comparatively free. The other day when I examined him I could not get any grating in the shoulder-joint; but there is a grating to be elicited in the knee-joints. Both joints are flexed, one more so than the other; neither one is ankylosed, but motion is limited. There is marked grating in the knees. Both ankles are rigidly ankylosed. The spine deviates a little to the right, and the cervical vertebræ are rigidly ankylosed. There is rigid ankylosis between the occiput and the atlas. The jaws are ankylosed, so that the boy can only open his mouth about one-eighth of an inch; yet he manages to eat all kinds of food in some way. He is well nourished and in fairly good condition, with the exception of involvement of so many joints.

This is the youngest case I have ever seen of this disease. Cases younger than this are reported, but I have never seen them. It is a question whether we should call this affection rheumatoid arthritis or arthritis deformans. The two terms to me are confusing.

The mentality of the boy is very good. Another peculiar thing about this case is that the *x*-ray shows complete ankylosis between the epiphyses of the radius and ulna. The *x*-ray shows this very clearly. The *x*-ray plate shows a peculiar gouged-out appearance in the first phalangeal joint of the ring finger, and also of the metacarpophalangeal joint of the ring finger, as if there had been considerable bone destruction, and later on bone formation. Also the bases of all the metacarpal bones of the right hand are united into one solid bony mass.

HOW TO USE ANTISTREPTOCOCCIC SERUM IN THE TREATMENT OF FACIAL ERYSIPELAS.

BY ELLSWORTH ORTON, M.D., PONTIAC, MICH.

On November 30, 1905, I was called to see a patient sixty years of age who presented a severe case of facial erysipelas, with a temperature of 103.5° A.M. and P.M. The infection, which began on the right side of the nose, in twelve hours had involved nearly the whole face. On the following day, December 1, I injected 20 Cc. of antistreptococcic serum (P., D. & Co.) into the patient's back. There was no subsequent abatement of the symptoms. Temperature 103.8° A.M. and P.M. December 2, in the morning, I injected 20 Cc. antistreptococcic serum in

four places immediately in advance of the line of demarcation, viz., in the hair over the forehead, in the hair back of either temple, and under the point of the chin. In the afternoon 20 Cc. was injected under the angle of either jaw. The following morning the patient's temperature was normal, and the swelling of the face had entirely disappeared.

From my experience in this case I am disposed to think that in the treatment of erysipelas the antistreptococcic serum should be injected liberally, and immediately in advance of the line of demarcation.

A GREAT effort is being made, says an exchange, to establish a medical college and hospital for the United Provinces in commemoration of the visit of the Prince and Princess of Wales to India. The proposal was mooted thirty-five years ago, but has until recently been dropped. Already some five lakhs have been subscribed. The scheme includes a hospital, class-rooms, a library, museum, laboratory, and residence for students and professors. The whole of the United Provinces seem awakened to the necessity for this institution, and the cities are vying with each other in the generosity of their support. If the public show a sufficient patronage toward its establishment the government will contribute to its maintenance and development.

THE international congress organized by the Scientific Society of the Hygiene of Food and of the Food Supply of Man will be held in Paris from February 26 to March 3, 1906. The congress will comprise fifteen sections, divided into two main divisions, viz., scientific research and social application. The following are the details of the sections: (1) Biological physics; (2) physiology and biological chemistry; (3) food supply and diet scales; (4) analytical chemistry, adulteration, and legislation; (5) statistics, delivery of foodstuffs (approvisionnement); (6) hygiene as applied to the technology of the storage and carriage of foodstuffs; (7) cheap food supplies and restaurants for adults; (8) cheap food supplies for the nourishment of infants; (9) coöperative stores and commercial competition; (10) cheap food supplies in commercial establishments; (11) the hygiene of the food supply in families; (12) the social prophylaxis of alcoholism and of tuberculosis as spread by food; (13) charities for the supply of food; (14) information for a rational diet and for the hygiene of food supply in schools.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

ANENT THE THERAPEUTICS OF SENILITY.

All vital manifestation has been said to be dependent upon the action of the ductless glands. Our external appearance, the attributes of sex, are the result of the internal secretion of these glands. Victor Horsley, Ewald, and Vermehren have compared old age to the myxedematous state. Lorand, of Carlsbad, in a recent communication has gone further than this, and ventures the opinion, based on numerous clinical and experimental facts, that senility is a morbid process consecutive to the degenerescence of the thyroid and other glands charged with the duty of maintaining trophic phenomena.

Lorand considers that among all the ductless glands the ingestion of ovaries or thyroids by the mouth appears the best means of combating senility, especially that form of premature senility which is typified in myxedema.

It is suggested that those who wish to live long in the land should commence the treatment by organotherapy at an early date, say between forty-two and fifty. It is at this age that there comes those unpleasant premonitions of the future state—embonpoint, gray-headedness, and the wrinkled face. The remedy for much of this, or at least the amelioration of these symptoms, is to be found in thyrotherapy combined with rational diet. The promulgator of these opinions is not ready to admit that old age can be entirely cured, even though it be but an "autointoxication followed by a cachexia," but the earlier the treatment the better will be the results. If, as he says, we admit the marvelous action of the ductless glands, we can accept without difficulty his clinical and therapeutic suggestions as to old age, because these are based on actual knowledge of the physiology and pathology of these internal secretions.

Men have died from time to time and worms have eaten them, but not for love. Men will grow old in spite of the marvelous secretions of the ductless glands. The events which tend to diminish the length of life seem to multiply with greater rapidity than the beneficent sources of longevity are discovered. Every dog will have his day, but sometimes there seems more days than dogs. The resources of these wonderful glands are, however, still far from being known. The properties of adrenalin would have been unimaginable a few years ago, and it is not only possible but extremely probable that new and even more brilliant stars are shortly to shed their light over the therapeutical horizon.

EDITORIAL NOTES.

The Spirochaeta Pallida (Schaudinn) in Syphilis.

During the last quarter of a century the medical profession has seen no less than twenty-five different organisms reported as the causative agent in lues. As long ago as 1837 Donne found and described a spirillum which he found in large numbers in the secretions of chancres. During the fore part of 1905 Siegel while examining the blood of a syphilitic came upon a flagellate organism which was a minute pear-shaped body and actively motile. These bodies were named by Siegel, *Cytoryktes Luis*. Schaudinn in looking for Siegel's organism found another type of parasite. He then inaugurated an extensive series of experiments in conjunction with Hoffman, of Berlin. His second paper describes the parasite as very delicate, spirally curved bodies of very low refractive index and actively motile. The thread-like form places the parasite in the class of parasites known as spirochaetæ. Schaudinn's findings have received extensive confirmation in Germany and France. The organism has been found during the active stage of syphilis in the following lesions: chancres, genital and extragenital, inflamed lymphatic glands, condylomata, and mucous patches. In tertiary lesions no positive results have been recorded. So far it has been impossible to cultivate any of the known spirochaetæ, and so their biological characters cannot be studied. As neither Schaudinn nor Hoffman claims positively that this organism is the true etiological factor in syphilis, it would be wise for the profession to take a very conservative view of the matter.

A New Anesthetic.

The past few years have seen a number of new methods of anesthesia brought to the attention of the profession, and every one has had some serious drawback. Last month a paper was read before the New York Academy of Medicine by Dr. Samuel J. Meltzer on the "Inhibitory and Anesthetic Properties of Magnesium Salts," which may prove of great value should the essayist's experiments be confirmed. In conjunction with Dr. John Auer, Dr. Meltzer studied the effects on some of the lower animals of subcutaneous injections of small doses of a 25-per-cent solution of magnesium sulphate. His efforts in this direction were rewarded by discovering that he could produce a profound anesthesia which lasted in most instances as long as two hours. Similar results were obtained from magnesium chloride and bromide, thus demonstrating the magnesium as the factor in producing the anesthesia. These experiments were followed by others, in which success was attained in producing anesthesia by means of intraspinal injections of magnesium sulphate. One cubic centimeter of a 25-per-cent solution to every 25 pounds of the body weight of dogs, rabbits, and monkeys was the amount injected. Following these injections complete anesthesia of the lower extremities was obtained. Dr. Meltzer gives it as his opinion that the chief advantage of magnesium anesthesia lies in the wide margin between the point of efficiency and that of danger. The great possibilities that this new method of anesthesia opens up suggest themselves.

Tuberculosis Exhibitions.

The recent Tuberculosis Exhibition held in New York did a great deal in the way of educating the public in regard to this disease. A large amount of interesting material was provided. The intention was to illustrate the methods now in use for the cure of tuberculosis and to point out the conditions in public and private life that favor the development of the disease, as well as the means that must be taken to check its spread. There were shown, among other things, photographs and models of various sanatoriums in this country and in Europe. Charts and diagrams were used to depict as graphically as possible the most prominent features of the disease and the fight against it. While the exhibition was in progress a number of popular lectures were given by prominent physicians. Such exhibitions ought to be

held from time to time in all of the large cities of the country, it being the easiest and best method of teaching the laity what it ought to know in regard to the "great white plague."

The Cold Storage of Undrawn Poultry and Game.

Last year the New York legislature defeated a bill the substance of which was the prohibition of the cold storage of game or poultry in the undrawn state and its subsequent sale to the public. We learn that the authors of last year's defeated bill are about to introduce a similar measure again this year. The defeat of such a measure is only an instance of the strength of the so-called "beef trust." Not content with squeezing the last penny out of the public by their high charges for all the meat that is sold, they actually menace the health of communities by selling undrawn game and poultry which has been left in cold storage for an indefinite period. Undoubtedly a large percentage of the cases of toxin infection which have become so prevalent of late years are directly ascribable to cold storage poultry.

Acetozone with Lumbar Puncture.

The efficacy of subdural injections in cerebrospinal meningitis has frequently been suggested. Subdural injections of iodine water have found favor with French clinicians. Dr. de Forest, of New Haven, Conn. (*Journal of the American Medical Association*), has recently called attention to a new remedy which seems admirably adapted to this purpose. His method consists in the abstraction of the spinal fluid by lumbar puncture and then the injection of 15 cubic centimeters of acetozone solution. The well known germicidal action of this substance, combined with its harmlessness and absence of irritating effect, signalizes it as one of the expedients in this dreaded malady of which much may be hoped.

ITEMS AND NOTES.

The Chicago Woman's Club has taken the initiative in a campaign for pure milk.

The German and Austrian balneologic societies will unite in a congress to be held at Dresden during March.

The first meeting of the American Association of Railway Surgeons is to be held at the Northwestern University Building, Chicago, October 3, 4, and 5.

Labor will be a dream, declares an exchange, if you give the primipara half an ounce of castor oil every other night for two weeks before the expected date of birth.

The medical practitioners of Berlin have formed an association for the prevention of the abuse of "Polikliniken" by patients in a position to pay for medical advice.

The Berlin ambulance and first-aid stations gave first aid during the last year in 54,678 cases, twenty stations being made use of, and 1980 times ice was given in emergencies.

A committee has been formed under the patronage of Prince Bernhard of Saxe-Meiningen for the erection of a memorial to the late Professor von Mikulicz at Breslau.

Physicians of Plymouth, Pa., are reported to have formed a union, fixed a schedule of fees, and agreed not to attend patients who are three months in arrears for professional services.

A Berlin lawyer has given, says an exchange, $12,500 to start a fund to supply financial aid to scientists studying important problems in the natural sciences, including biology and medicine.

The Chicago Policlinic will erect a new building at the southeast corner of Oak Street and La Salle Avenue. The new structure is to be six stories high, and will be thoroughly modern in the equipment of all departments.

His excellency Prof. Rudolf von Leuthold, chief body-physician to the German Emperor, and director-general of the German Army Medical Department, died on December 3 after a severe attack of influenza at the age of seventy-five.

Professor Kassowitz has been elected president, and Professor Ausserer and Imperial Councillor Dr. Charas vice-presidents, of the Austrian Society for the Repression of Quackery, which was formally organized on November 11, 1905.

Dr. Greenwood, medical officer of health, Blackburn, England, has prepared a report on the subject of a sanatorium for the consumptives of the town, in response to a request of the Health Committee of the borough for "more satisfactory information."

Patent medicine pedlers who go about the country vending preparations containing alcohol must hereafter pay a special tax at every separate place where they make any sales. This is the order issued by Commissioner Yerkes to all collectors of internal revenue.

The eucalyptus tree has been considered by the Panama Canal Commission for the purpose of eliminating the breeding places of the mosquitoes, this method having been used with much success by the French in Algiers, the marshy lands having thus been dried up.

Professor Terriani says that 80 per cent of the child criminals of Italy are manufactured by bad environment and inadequate education—in other words, by preventable causes; that 30 per cent of the criminals of the country are minors, and of these 85 per cent are thieves.

In connection with the meeting of the French Association for the Advancement of Science to be held at Lyons in August, 1906, Professor Courmont, president of the Section of Hygiene, intends to organize in the name of the city of Lyons all methods, apparatus, and materials used in town sanitation.

The Japanese Minister of War says that Japan at one time in the course of the war had 1,200,000 troops under arms. Of this number, said the minister, 70,000 died and 310,000 were wounded or became sick, but only 15,000 died from sickness and 9800 from wounds after coming under treatment.

According to the Norwegian papers an economical method of producing alcoholic intoxication is being practiced by the lowest classes of Christiania. The toper fills the palm of his hand with a very strong form of corn brandy and snuffs it up into the nose. This is repeated several times, though once is sufficient to produce complete intoxication.

At the thirtieth annual commencement exercises of the New York City Training School for Nurses, held recently at the Nurses' Home on Blackwell's Island, a class of forty-one young women received diplomas, at the same time taking the Hippocratic oath to preserve inviolate the secrets of the sick-room.

Dr. H. T. Patrick, Dr. Frank Billings, Dr. J. B. Murphy, Dr. H. N. Moyer, and Dr. Frank Norbury, all of Chicago, were chosen by the Civil Service Commission as a board for the purpose of preparing the questions and grading the papers for examination for assistant physicians in the Illinois State hospitals for the insane. The salary is stated at $200 a month.

It is reported by an exchange that Prof. V. Czerny is to retire from the surgical clinic at Heidelberg in order to devote his energies exclusively to the Institute for Cancer Research, which was recently founded there mainly by his efforts and donations. Garre, who recently took Mikulicz's vacant chair at Breslau, is suggested as Czerny's successor. Nearly $200,000 has been subscribed for the new cancer institute.

At the twenty-ninth annual meeting of the American Dermatological Association, held in New York City December 28, 29, and 30, 1905, the following officers were elected for the ensuing year: President, Dr. M. B. Hartzell, of Philadelphia, Pa.; vice-president, Dr. Thomas C. Gilchrist, of Baltimore, Md.; secretary and treasurer, Dr. Gover W. Wende, of Buffalo, N. Y. The next meeting of the association will be held in Cleveland, Ohio, in May, 1906.

The *Philippine Journal of Science* will be published monthly from January, 1906, under the auspices of the Bureau of Government Laboratories, Manila. While the new journal will take all science for its province, medicine will occupy a far larger space than any other single subject; and as the Philippines offer an especially rich field for medical research, the hope appears to be justified that this portion of the journal will be of great interest and value.

The German Colonial Office has made a grant of $300,000 toward the cost of an expedition to East Africa for the investigation of sleeping sickness. The expedition is to consist of a competent protozoölogist, a physician well acquainted with health conditions in East Africa, and a bacteriologist who has given special attention to the subject of immunity and the prevention

of infectious diseases. It is reported that Professor Koch may perhaps be placed at the head of the expedition. The expedition will probably be away from Germany for a year and a half.

Among the bequests of the late millionaire Charles T. Yerkes, who died in New York City on December 30, 1905, is also a paragraph which deals with the founding of a hospital to be known as the Yerkes Hospital. The sum of not more than $800,000 is to be set aside for the purpose of purchasing a proper plot of ground in the borough of the Bronx, city of New York, and for the building of a hospital. He also provides for support and maintenance of the hospital, which will be open to all patients not financially capable of paying for their proper treatment.

The *Deutsche medicinische Wochenschrift* announces that the Copenhagen and the Berlin academies of science have united in publishing a catalogue of all the Greek and Latin medical writings that have been handed down to us from antiquity. This catalogue, says an exchange, is to be preliminary to the suggestion that the International Association of Academies of Science undertake the task of publishing a complete scientific edition of the collected works of the physicians of antiquity. The plan is to be proposed at the next general meeting of the delegates of the association, which will be held at Vienna during the spring of 1907.

Dr. T. D. Crothers, of Hartford, Conn., is anxious, says the *Medical Record,* to secure the names and addresses of medical men who are interested in the literature relating to inebriety, alcoholism, drug-taking, drug neuroses, etc. One object is to obtain a list of names of physicians who would be pleased to receive reprints, papers, and abstracts of medical literature on this subject; also to establish a bureau by which the profession may be made acquainted with researches along these lines, and thus be able to understand and advise concerning the rapidly increasing problems which center about the use of alcohol.

Dr. Jean Charcot, son of the late Professor Charcot, has offered to the Clinic for Diseases of the Nervous System his late father's library and all his manuscripts. This library is, perhaps, the richest in the world in so far as its special subjects are concerned. Dr. Charcot also says that he is willing to hand over most of the artistic library furniture in which his parents had stored the books and MSS. The sole condition attached to

the gift is that the library shall always be attached to the clinic in question. The faculty will probably accept the gift within a fortnight after the reception of the report which is about to be presented by Professor Raymond.

The fourth International Medical Insurance Congress will be held at Berlin from September 11 to 15, 1906. The programme comprises two sets of questions: (*a*) life insurance, (*b*) accident insurance. Among the questions to be discussed under the former of these heads are: The early recognition of a tendency to tuberculosis, especially pulmonary consumption; obesity in relation to insurance; the influence of syphilis on the duration of life; the vaccination clause in insurance forms. Under the head of accident insurance the following questions will be discussed: Acute aggravation of mental diseases resulting from accidents; the influence of traumatism on latent and pronounced organic disease of the spinal cord and brain; criteria of the aggravation of functional neuroses by accidents. Communications relative to the congress should be addressed to Dr. Manes, 22 Spichernstrasse, Berlin, W.

Among the bills now before Congress is one for the reorganization of a corps of dental surgeons of the army, not to exceed in number actual requirements, nor proportion of one to one thousand in the regular army. Appointees must be citizens, between twenty-two and thirty years of age, graduates of standard American dental colleges, of good moral character and professional repute. They must pass physical and professional examinations, which shall include tests of skill in dentistry. Dental surgeons attached to the medical department of the army at time of passage of act may be eligible to appointment, three to rank of captain and the others to rank of first lieutenant, on the recommendation of the surgeon-general, subject to examination; professional examination may be waived in case of dental surgeons whose efficiency reports and entrance examinations are satisfactory to the surgeon-general. The right to promote shall be limited to the rank of captain after five and major after ten years' service; number of majors shall not at any time exceed one-eighth nor the number of captains one-third of the whole number in the dental corps. The surgeon-general is to organize a board of three examiners to conduct the professional examinations—two civilians, whose qualifications are certified by the Executive Council of the National Dental Association, and the third from the contract dental surgeons.

NEW PUBLICATIONS.

NERVOUS DISEASES OF CHILDREN.

The treatise by Dr. Sachs on nervous diseases in children has assumed the importance of a second edition, revised and enlarged, and can also claim the distinction of having been translated into several European languages, which is something of a triumph for an American writer. The work is in every way complete, and its compilation reflects the painstaking efforts of its author. It traverses the whole field of nervous disease in children and will not be found wanting when consulted upon any of the matters with which it deals. A comparison of the present work with the former edition shows that important advances have been made in neurology and the allied sciences in recent years..

A Treatise on the Nervous Diseases of Children, for Physicians and Students. By B. Sachs, M.D. Second Edition. William Wood & Co., New York.

NEUROTIC DISEASES OF CHILDHOOD.

A study of the physiological peculiarities of the immature nervous systems of infants and children has resulted in the compilation by its author of the present manual of the nervous diseases of children. The work surveys the field of nervous disorder in children in a very capable manner. The early chapters dealing with immature inhibition are especially illuminating. The book will be found easy and pleasant reading and will convey much-needed information on many little-understood problems.

Neurotic Disorders of Childhood. By B. K. Rachford, M.D. E. B. Treat & Co., New York.

A SYLLABUS OF MATERIA MEDICA.

A useful little volume which in size will fit the pocket has been compiled by Dr. Warren Coleman. It consists of a review of the modern materia medica and its uses, and contains a variety of information which the physician will find timely and useful.

A Syllabus of Materia Medica. Compiled by Warren Coleman, M.D. Second Edition. William Wood & Co., New York.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Superior Accessory Thyroids.

These structures which, though rare, were known to the older anatomists are described by T. B. Murphy (*Journal of the American Medical Association,* Dec. 16, 1905), who discusses their embryology, physiology, etc. It is probable that they often supplement or take on the function of the normal thyroid. They are found usually within a space roughly represented by an inverted trapezoid, the larger base of which is a line running between the apices of the mastoid processes, the smaller base a line tangential to the arch of the aorta, and the sides represented by the sternomastoid muscles. They have been found outside of this area, in the pleura, bones, abdominal cavity, and elsewhere, but such tumors must be considered as metastatic. Accessory thyroids are explained embryologically only when they occur in the above area. They may occur at any age, and are most common in females. In most cases there is no ostensible exciting cause, but in a few cases acute infection may be considered as such, and in several cases puberty was closely related to the development of these tumors. They are generally found at the base of the tongue, and vary in size from that of a cherry to that of an egg or even larger. The tumor is well encapsulated, not surrounded by an inflammatory area, and is bluish-red in color owing to the abundance of vessels. The consistency is soft, and it is sometimes difficult to decide whether one has to deal with a soft tumor or a cyst. The usually accepted theory of their origin is that they are remnants of the thyroglossal tract. While they may accompany normal thyroids they have been found in several instances to be the only thyroid existing. Two personally observed cases are reported.

The difficulties of diagnosis are noticed and the lack of constitutional symptoms, and often at first of any symptoms whatever. Generally, however, when the true nature of a tumor of the neck is well established an accessory thyroid should be thought of; and if a tumor is found at the base of the tongue, or between it and the hyoid in or near the middle line, if there is no adjacent inflammatory reaction, if there are no marked subjec-

tive symptoms, if it undergoes periodic changes in size and tension, if the patient be a woman, and especially if she complains of some disturbance of menstruation, the condition is highly suggestive. In the differential diagnosis, besides the specific differences between accessory thyroids and other growths which are pointed out, particular attention is called by Murphy to the clinical course, the duration of the growth, and the presence or absence of the normal thyroid.

Treatment is both medical and surgical, but the administration of drugs is usually unsatisfactory. Iodide of potash may reduce the size of the tumor slightly, and Murphy suggests the use of thyroid tablets or the milk of thyroidectomized goats. The presence of a normal thyroid is to be assured before surgical treatment is attempted, and it must be remembered that in some pathologic conditions of the thyroid the accessory growth may be physiologically compensatory. In such a case operation is justified only when the tumor causes symptoms of asphyxia; even then the surgeon must be conservative and remove only a part of the accessory thyroid. Extirpation is the only effective treatment, and the method of election is by the subhyoidal or submental route. The prognosis is good if the normal thyroid is present. The most unpleasant possibility is myxedema, which occurred in five of the cases tabulated. Recurrence of the tumor has been observed in six of the patients operated on. The article is illustrated.

Rupture of the Esophagus Resulting from External Traumatism.

H. E. Lomax (*Medical Record*, Jan. 6, 1905) contributes an exhaustive dissertation on this subject, and says that a thorough review of the literature shows there has been, up to this time, but one case on record which can be properly included under rupture from external traumatism. With the exception of a border-line case, all other cases are instances of ruptures from muscular action, perforations associated with various pathological conditions outside the esophagus, foreign bodies within this tube, or else they are cases of ante-mortem or post-mortem softening. The author's case, which is the second to be reported, was that of a woman of forty-four years, whose body was forcibly compressed in an elevator accident. She was not rendered unconscious and did not complain of great pain. Death occurred eleven hours later after a rather sudden onset of the symptoms of col-

lapse, and the autopsy revealed a rupture of the esophagus, close above the diaphragm, with escape of stomach contents into the left pleural cavity. There were, in addition, multiple fractures of the pelvis. The author considers that this case is beyond cavil an authentic one of traumatic rupture by violence from without, as all conditions that might cause error in this respect, such as cadaveric softening, caseous glands, aneurism with erosions, varicose esophageal veins, malignant disease, agonal esophagomalacia, etc., could be excluded.

The writer then reviews the cause of rupture very extensively and describes the results of his own experiments on the cadaver. These lead him to believe that the attendant injury to the vagus nerve plays an important part in the etiology of the rupture, and also in the production of the symptoms following it. A résumé of these shows that vomiting, collapse, cyanosis, dyspnea to the extent of orthopnea, and emphysema are symptoms of the first rank. Extreme precordial oppression, accleration of pulse, severe pain, either fixed or situated in the course of the esophagus and increased by movements of the spine, would give additional ground for suspicion. Finally, a diagnosis of this rare condition can be made with some degree of certainty if to the above symptoms a physical examination of the chest shows evidence of pneumohydrothorax or a more or less collapsed lung. The treatment is said to be symptomatic, as the lesion is always fatal. The possibilities of operative intervention are, however, discussed as a problem for the future.

Tetanus.

E. W. Archibald (*Montreal Medical Journal,* December, 1905) says that antitoxin is an efficient antidote when in contact with the toxin. It must be brought into direct contact with the toxin in the nervous system by operative means. Therefore, tetanus is no longer a medical but a surgical disease.

The infection being an ascending one, we must block the nerves, the cord, and possibly also the lower neurones of the cerebrum, by injections of antitoxin directly into these structures.

It must be admitted that in the case of cord injections this is partly a blind procedure, because we do not know how widely or exactly where the antitoxin will diffuse once it is inserted, or to what extent it will come into contact with the toxin; but it is, on the other hand, a logical following of what light we have.

The writer would be inclined, in cases which bid fair to be fatal, to attack the nervous system from all sides, using the intracerebral as well as the intramedullary and intraneural injections. The dangers of such interference have been proved to be slight, and should not deter us, in view of the otherwise fatal nature of these cases.

It is of the utmost importance to inject early in any case which in our judgment is evolving acutely.

Removal of Tumor of Suprarenal Capsule.

N. Heidemann (*British Medical Journal,* Dec. 23, 1905) reports the removal of a tuberculous tumor of the suprarenal capsule of the size of a child's head. About twenty-four cases were collected by Wendel and published in 1904, but it was not always clear how far they were malignant or innocent. Heidemann's patient was a lady aged fifty-two, who had suffered from a steadily increasing debility, emaciation, and nervous depression. She had previously been very robust. A tumor in the right loin was visible on inspection; it was freely movable forward. The urine was albuminous, and the albumin, it was reported, proceeded from both kidneys. Abdominal nephrectomy was performed, the operator preferring it to a lumbar operation when a renal or suprarenal tumor has to be removed. It was not possible to save the right kidney. The tumor was reported to be a typical adrenal "struma." The patient recovered and steadily improved in general health until she regained her former strength. Heidemann lays stress on the absence of any kind of discoloration of the skin and of any hemorrhagic tendency, whether before, during, or after the operation, yet the tumor was of the type seen in Addison's disease, and when it was removed the constitutional symptoms disappeared. The albuminuria also passed away, but in a discussion on this case some doubt was expressed as to whether the left kidney was the seat of nephritis or any other disease which is associated with albuminuria.

The Technique of Abdominal Section.

Denslow Lewis (*Medical Record,* Sept. 30, 1905) advocates in abdominal operations the use of an incision large enough to enable the operator to see what he is doing. He secures perfect hemostasis throughout the operation, and turns in all raw surfaces so that only smooth peritoneum is left at the end of the

operation. In pus cases removal of the source should be carried out at once, without unnecessarily prolonging the operation and endangering the patient's life. Sterile catgut is used for sutures instead of silk. After operation no opium should be given, and as little anodyne as possible. The bowels should be moved early by calomel and enemata, and thirst relieved by salt solution by rectum. Uterosuspension the author disapproves of, since the symptoms are referable to metritis and other conditions, which should be relieved, when the prolapsus or retroversion will be cured. In suppurations one should open and drain, but not make the operation any more severe than is necessary, as the patient's strength is easily exhausted. Thorough drainage may be established through the vagina. Suppuration in peritonitis requires drainage, and irrigation is of value. In cases of rupture of the bowel or traumatism the wound should be closed at once with a Lembert suture, the edges well turned in. When part of the gut must be removed the author prefers closure of the ends and a lateral anastomosis. In ruptured ectopic gestation the sooner the abdomen is opened the better. The Cæsarian section should be used more frequently for contracted pelvis, etc. Small fibroids should be enucleated, and for large or multiple ones supravaginal amputation is to be preferred.

Ureterectomy After Nephrectomy.

A. Ernest (*American Medicine*, Jan. 13, 1905) states that subcutaneous lumbar pelvioureteral implantation is simple, safe, and satisfactory, and that by this means we can (1) avoid the additional risk of immediate ureterectomy; (2) secure free drainage and maintain an opening through which drugs may be introduced to hasten retrograde changes; (3) on the other hand, the opening beneath the skin does not prevent primary union, and avoids exposure on the skin surface. Should mucus or pus accumulate it cannot burrow in the retrocolonic space, is easily recognized, and can be let out through a small skin incision and a tube inserted for drainage. The absence of ligature on the ureter prevents deep inflammation, and if the ureter must for any reason be subsequently removed it can be accomplished without difficulty, from a patient who has had ample time to recuperate from the primary operation. The presence of the drainage-tube does not interfere with the patient getting out of bed at an early date after operation (in his case the tenth day), nor the exercise of her usual home duties. The drainage-tube must be kept in

place as long as the discharge continues, and should it close and secretion accumulate, the skin can be incised and the drain reinserted until atrophy of the ureter is accomplished.

Lateral Curvature of the Spine.

Walter Truslow (*Brooklyn Medical Journal,* December, 1905) says that systematic physical training is the main therapeutic agent in the correction of lateral curvature of the spine.

Structural changes cannot be overcome by muscular effort alone.

Plaster-of-Paris jackets, applied under conditions of progressive longitudinal and lateral traction and frequently renewed, will rapidly overcome muscular contraction, and are advantageously employed in suitable cases of moderate severity.

This treatment must be promptly followed by the use of a brace and vigorous physical training.

MEDICINE.

The Abrupt Onset of Typhoid Fever.

The importance of the irregular types of typhoid, especially of those cases in adults with abrupt onset, is emphasized by Mr. Manges (*Journal of the American Medical Association,* Dec. 30, 1905), both on account of the importance and difficulties of their diagnosis and their high mortality. He notes briefly some of the literature of the subject, and remarks that a distinction must be made between these cases and those that seem to be abrupt but are not—the perforative cases. He finds from the records that the cases with true abrupt onset formed about 10 per cent of all cases in the Mt. Sinai Hospital; they are, therefore, not infrequent. Cases of abrupt onset may be ushered in by various symptoms, either with chills, single or repeated, severe pains in the head, abdomen, or other parts of the body, or by violent delirium; they may simulate appendicitis, pneumonia, nephritis, pleurisy, grip, diphtheria, cerebrospinal meningitis, etc.; still another type are the hemorrhagic cases. A unique case in which the initial symptoms were tachycardia and heart failure is mentioned.

Some cases of paratyphoid fever must also be differentiated

from these cases of sudden onset. The cases resembling cerebrospinal meningitis are usually readily differentiated by their low leucocyte count, though clinically they may run an identical course for several days. The pneumotyphoid and pleurotyphoid types are well known and hardly require description. The type beginning with pain simulating appendicitis, or with pain in the head, are noticed, and cases in which the diagnosis was difficult are mentioned. Another type is that marked by sudden high fever, with or without chills, the fever sometimes reaching its maximum of 105° to 107° the first twenty-four hours, and often suggesting severe poisoning rather than typhoid fever. Death usually occurs at the end of the first week. Fortunately these foudroyant cases are rare. The hemorrhagic cases of typhoid are often of sudden onset and run a rapidly fatal course. Malaria may complicate the onset of typhoid, and aside from this repeated small chills are very common in the beginning of the attack, and repeated severe chills without any malarial cause may also occur. Sudden onset in the throat is rather rare and appears in the shape of the characteristic Bouveret ulcers or severe pharyngitis. Diphtheria of the pharynx may be associated with sudden onset of the disease in some cases, examples of which have been previously published by Manges. Another type illustrated by a case is that of suddenly occurring severe nephritis with continuous fever, and the grip type is still another of special importance and gravity as regards the diagnosis. The progress of the case, the roseola, the Widal reaction, etc., alone enable us to differentiate these cases.

Manges explains these cases of sudden onset by a silent development of the germs in the system without presenting any marked clinical features until the disease is well developed. In some cases, however, a rapid development of the organisms in the body must be invoked to account for the condition. This rapid growth is favored by preëxisting infection of some kind, or other causes lessening the power of resistance. Whatever may be the explanation, the clinical fact remains that in about 10 per cent of cases of typhoid an abrupt onset may occur with aberrant clinical manifestations, and that in any case of severe acute illness of sudden onset with marked disproportion between the severity of infection symptoms and the clinical findings, a properly applied test for the Widal reaction must never be omitted. The fact that this reaction occurs more early in cases of typhoid fever of acute onset gives it a peculiar value in these cases.

Should the Youth of this Country be Instructed in a Knowledge of Sexual Physiology and Hygiene?

Prince A. Morrow (*American Medicine,* Jan. 13, 1906) says the general principle is laid down that the education of the public is the most valuable of all measures for the prevention of communicable diseases. Its importance is emphasized in the case of diseases the communication of which lies entirely within the control of the individual. The object of the proposed education is to give the youth of this country a clear comprehension of certain physiologic truths which have a direct bearing upon the regulation of their sexual lives, and of the serious consequences in the shape of disease and death which follow a breach of hygienic laws. In other words, it is to teach them how to live according to the laws of a healthy nature. This instruction in the physiology and hygiene of the sex function should form an essential integral part of the education of youth.

Dr. Morrow criticizes our present educational system, the policy of which is to launch the young into the world in complete ignorance of everything pertaining to the laws of life reproduction. In seeking this knowledge the youth is but obeying a law of his mental evolution. Since this knowledge cannot be had from legitimate sources—from parents and instructors—it is gained surreptitiously, and usually from depraved sources, dissolute companions or erotic or quackish literature. To be salutary as a safeguard, therefore, this hygienic education should be given in youth, for it is during this period that the foundations of what may be termed the "sexual character" are laid, and habits of mind and practices are formed which in a great measure determine the future sexual life of the individual.

Prognosis in Tuberculosis.

Lawrence F. Flick (*American Medicine,* Jan. 6, 1906) says the prognosis in tuberculosis depends: (*a*) On the virulence of the tubercle bacillus; (*b*) on the dose; (*c*) on the resistance of the host; (*d*) on the coexistence of other microörganisms; (*e*) on the amount of tissue which has been destroyed; (*f*) on the duration of the disease; (*g*) on complications arising from toxemias; (*h*) on age; (*i*) on race; (*j*) on social condition; (*k*) on environment; (*l*) on financial resources; (*m*) on temperament; and (*n*) on character. In forecasting the future of a tuberculous subject the physician should weigh carefully all matters

bearing upon the case, and even then should be guarded in his opinion. He should bear in mind that the tendency is always toward recovery, but that there are many impediments in the way of recovery. Restoration to physical health is comparatively easy, but the establishment of a condition of absolute sterility from the tubercle bacillus is difficult. The price of permanent recovery is constant and eternal vigilance and the pursuit of that kind of life which is necessary for recovery. Prognosis should, therefore, always be guarded and conditional. We may assure the patient that he will be restored to physical health and will remain well so long as he takes proper care of himself, but we should impress it upon him that his good health will only continue so long as he does take good care of himself.

The Etiology of Noma.

C. Herrman (*Archives of Pediatrics,* November, 1905) says that the spirochaeta of necrosis is the microörganism of greatest importance in causing noma. It is identical with that which is found in the ulceromembranous lesions of the mouth, the spirillum sputigenum and spirochaeta dentium of Miller. Though apparently two organisms, they are but one in different stages of development, and belong to a connecting link between the bacteria and the lowest forms of animal life; hence they cannot be stained and grown on culture media by usual methods. They are in the atmosphere in the form of resistant spores, and are deposited on food, water, etc., and then taken into the body. They do not develop well in the human body, hence noma is not very contagious. Ulcerative and gangrenous stomatitis are different stages of the same process. Diseased teeth have an important share in causing ulcerative and gangrenous stomatitis; hence in the infectious diseases of childhood diseased teeth should be removed. Treatment should consist in the careful use of the Paquelin cautery.

Diagnosis of Bright's Disease.

L. B. Pilsbury (*American Medicine,* Dec. 23, 1905) states that for diagnosis of this disease it is unnecessary to make minute distinctions. Clinically there are the acute, subacute, and chronic forms, which often shade into each other almost imperceptibly. If an acute process is followed for months or years by a train

of symptoms indicating constant disturbance of kidney function, we may feel justified in making a clinical diagnosis of chronic kidney trouble, though we may be disappointed at autopsy in finding few anatomic changes. It is perfectly proper to treat such a patient for renal insufficiency. Clinically we need only decide whether the lesions are predominantly either acute or chronic, parenchymatous, or interstitial. Strictly speaking, an acute nephritis must show an inflammatory exudate of serum, leucocytes, and erythrocytes between the tubules, but the degenerative changes are always present in the tubules and in the glomeruli. In chronic parenchymatous nephritis the secondary or fatty and contracted kidney may be as small as that of a chronic interstitial nephritis, but it is distinguished from the latter by the fact that the stage of contraction is preceded by a stage of something else, and that the production of connective tissue is preceded and overshadowed by degenerative changes. In chronic interstitial nephritis the production of new connective tissue precedes or goes hand in hand with the degenerative changes in the tubules and the glomeruli.

Nervous Manifestation in Rheumatism.

F. T. Poynton and A. Paine (*Lancet,* Dec. 16, 1905) draw the following conclusions:

1. There is a great infective process, the rheumatic, to be placed among that series in which the staphylococcus, streptococcus, pneumococcus, and gonococcus are to be found. The infective agent is a diplococcus, with, in all probability, some peculiar characteristics.

2. Eventually rheumatic chorea will prove to be a local infection of the nervous system, and most of its symptoms to be the result of a slight meningoencephalitis and possibly meningomyelitis. The authors' reasons for this belief are: (*a*) They have isolated and cultivated the diplococcus from the spinal fluid in four cases of fatal rheumatism, in three of which there was chorea at the time of death; (*b*) they have produced twitching movements, arthritis, endocarditis, and pericarditis by intravenous injections of the diplococcus into rabbits; (*c*) they have demonstrated them in the brain and pia mater of the rabbits that had shown the twitching movements.

3. In rheumatic hyperpyrexia no gross macroscopical lesion is found; it is probably an acute rheumatic toxemia, in contrast to the multiple and slight local lesions which exist in chorea.

Tonsillitis.

R. M. Niles (*Medical Record,* Dec. 23, 1905) in discussing the treatment of this affection says that the patient should be isolated, should receive broken doses of calomel, followed by a saline laxative or croton oil and quinine in tonic doses. Strychnine, aconitine, sodium salicylate, guaiac, and anodynes may also be required. Hot alkaline gargles and a spray of hydrogen peroxide are useful. Chlorate of potassium has little value. Often the application of the tincture or vinegar of capsicum produces the most brilliant results. Congestion and edema are reduced, the separation of sloughs is facilitated, granulations are stimulated, vasomotor inertia is overcome, and normal tissue metabolism is reëstablished. Tincture of capsicum, full strength or diluted with cod-liver oil, should be applied to the Schneiderian mucous membranes in the treatment of the rhinitis, which is a frequent concomitant of the tonsillar involvement. The nasal mucosa is first cocainized, and the capsicum is then applied with a cotton-covered applicator.

The Pathology of Dropsy.

F. A. Bainbridge (*Practitioner,* December, 1905) sums up the etiological facts as follows: (1) A small output of urine. In chronic nephritis the onset of cardiac hypertrophy and increased flow of urine are often accompanied with diminution of dropsy. (2) The retention of sodium chloride and other salts, which means retention of water as well. (3) Increased catabolism in the muscles owing to loss of control over muscular metabolism by the kidneys. This means accumulation of waste products in the muscles and tissue spaces, which by osmosis favors edema.

THERAPEUTICS.

Formaldehyde in the Treatment of Infectious Disease.

D. Schwarzenback has published at length in the *Lancet* of December 23, 1905, his observations on the internal use of formaldehyde in infectious diseases due to the invasion of streptococci. Salicylates are prescribed in rheumatic affections with varied success; they seem not to act detrimentally on the bacteria, but merely to neutralize the toxins. Probably preparations

of mercury and iodine act analogously against syphilis. The insufflation of powdered sulphur has no injurious effect on the bacillus of diphtheria, but it seems to destroy the streptococci; this explains the variability of the effects produced and the prompt relief obtained in cases of membranous angina as a complication of scarlet fever. Fiegel and Jakobson have proved the harmlessness of formaldehyde. Rosenberg has detected free formaldehyde in the blood and recommended the use of formamint as an internal antiseptic. Each dose contains one centigramme (one-sixth of a grain) of formaldehyde, in addition to small quantities of menthol, pepsin, hydrochloric acid, and citric acid, and is given at intervals varying from every half-hour to every two hours for several days to adults, and in smaller doses to children; they are very palatable. Dr. Schwarzenback has treated quite a number of cases of streptomycosis with formamint with good results. If taken at an early stage it soon brings to an end attacks of erysipelas, erythema nodosum, and acute lacunar tonsillitis. In the latter case it should be followed in from twenty-four to thirty-six hours by the administration of salicylates, such as sodium salicylate, aspirin, etc. It also acts well in acute exacerbations of chronic pharyngitis in which streptococci are concerned. Formaldehyde does not irritate the kidneys, and can be recommended in cases of pyelonephritis.

Behring's New Tuberculosis Remedy.

A. C. Klebs (*Journal of the American Medical Association*, Dec. 16, 1905) remarks on the sensational element in Behring's announcement, and also on the fact that there are some ambiguities of expression that he thinks may perhaps have been intentional. We must take it, he states, that Behring did not mean to say that the remedy he has discovered will cure tuberculosis in all its stages, but that it will prevent in those infected the development of destructive processes—*i.e.*, phthisis. This accepted, he proceeds to analyze his theory of a curative principle. It seems that the curative principle is found in a well defined constituent of the tubercle bacillus which Behring calls T. C., the same designation as that given years ago by E. Klebs to his assumed curative principle contained in tubercle bacillus cultures. The healing action is exercised by the transformation of this T. C. within the living body cells into a hypothetical derivative which he calls T. X., because he does not know

whether it is a ponderable body or not. A cellular immunity is thus produced, quite different from the ordinarily accepted humoral immunity, and Behring says his clear conception of this was derived from an acquaintance with Metchnikoff's work on phagocytosis. Experimental proofs of this, however, are not given. From Behring's sketch of the method of preparation, Klebs understands that the T. C. is obtained by grinding up what Behring calls the "rest bacillus," a product remaining after certain toxic and non-toxic groups of substances, including Koch's tuberculin, have been removed. Behring considers it of importance for the comprehension of the therapeutic T. C. action that although incapable itself of reproduction it can produce tubercles that do not casefy or soften, but heal spontaneously.

From the above statement of the substance of Behring's address Klebs deduces certain definite facts. First among these is the fact that Behring finds his curative principle preëxistent in the tubercle bacillus, and this implies a radical change from his formerly expressed views, and is, he claims, a brilliant vindication of the view persistently maintained by E. Klebs and substantiated by him in numerous tests in animals and men. Klebs sees the mechanism of the immunizing process of his T. C. in a bactericidal action. A. C. Klebs here thinks, from what he knows of Behring's previous studies, that it is probable that he also imagines a more or less direct bactericidal action to take place. On the whole he says "it seems probable that Behring's new method is based on principles that have already been more or less elaborated by others, especially by E. Klebs and Metchnikoff. How much ultimately suffering mankind is to profit cannot be predicted, nor can Behring's expressed though carefully and ambiguously worded expectations mean anything but a plausible, by him yet unproven, hypothesis of a curative principle, applicable in human tuberculosis."

The Treatment of Bronchopneumonia.

S. A. Visanska (*Medical Record,* Dec. 16, 1905) says that the first requisite is to get the confidence of the family. Abundant fresh air must be secured by having the windows opened above and below, and if possible an apartment with a fireplace should be chosen as the sick-room. Of the many external applications recommended he prefers the hot mustard bath. The child should remain in it until there is a pink glow all over the

body, and should then be wrapped in a blanket and placed in bed, when, as a rule, it falls asleep. At the same time the high nervous tension is relieved, the child breathes more easily, the pulse is not so rapid, the capillaries dilate, and the little patient often breaks out in a copious perspiration, which carries off the toxins, thereby throwing less work on the heart, kidneys, and intestinal canal. These baths should be repeated as often as necessary. Hot camphorated oil with mustard rubbed into the chest is an efficient application if pleurisy is a prominent symptom. Several prescriptions for cough mixtures are given. Whisky and strychnine are the two preferable stimulants, and when the pulse is above 130 tincture of digitalis is used, which has proved very valuable in the author's experience. It is advisable not to give the patient any water for several minutes after swallowing the dose of digitalis, which may be administered in a few drops of syrup, as water precipitates digitoxin. If the child is not breast-fed, broth, beef, milk, and egg albumen will constitute the principal articles of diet.

Gelatin in Diarrhea.

Mann and Herzberg (*Therapie der Gegenwart,* xlvi) report excellent results from the treatment of diarrhea with fluid gelatin. A 10-per-cent solution in distilled water is boiled for six hours and then filtered. This solution will keep for some days. Herzberg for some time has given calves' feet as a soup (1 pound to 1 quart of water boiled down to 1 pint) in the treatment of the diarrheas of children and in typhoid. Tubercular lesions do not yield to this treatment.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
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Disorders from Eye-strain.

O. A. Griffin (*Journal of the American Medical Association,* Jan. 6, 1906) regrets the lack of appreciation of the importance of eye-strain by so many members of the medical profession. The silence of so many of the text-books on internal and nervous disorders is another unfortunate fact, and accounts in part

for their common neglect by the practitioner. For the sake of brevity he groups the usual symptoms of eye-strain under the three heads of phenomena of (*a*) muscular asthenopia, (*b*) conjunctival and retinal irritation, (*c*) defective vision. Sensations of dizziness and nausea frequently result from these conditions, though they may also be caused by astigmatism, especially when the axes are at oblique angles. Aside from the direct symptoms of orbital muscular fatigue, congestion and lacrimation and asthenopia, constant or accentuated by work, the systemic reflex symptoms are of still greater importance, and it is especially to these that he directs attention. A muscular or refractive defect that in one person with ample reserve power may cause few or no disturbances, in another may seriously impair the vital functions, the causal ocular weakness being altogether unrecognized. Thus the ophthalmologist frequently meets cases of chronic headache, gastric disorders, nervous exhaustion, epilepsy, chorea, etc., that have resisted medical treatment, but receive permanent relief by the correction of an ocular defect. To illustrate his statements he gives histories of a number of cases of chronic headaches, insomnia, gastric disturbances, neurasthenia, and other nervous symptoms thus relieved in his practice. He notes an increasing interest in the subject as an encouraging indication, but states that there is yet room for improvement both here and abroad.

On Certain Forms of Ocular Tuberculosis.

Chas. S. Bull (*Medical Record,* Dec. 9, 1905) says that tuberculosis of the conjunctiva is much more often a primary disease, the result of an ectogenic infection, even in cases where tuberculosis has already developed elsewhere in the body, than of infection occurring through the blood. But although tuberculous disease of the conjunctiva is not often secondary to tuberculous disease in other parts of the system, yet it is itself liable to be the starting-point of general tuberculosis. An intact normal conjunctiva can, however, never be infected. There must always be a loss of substance, usually a traumatic abrasion. Tuberculosis of the conjunctiva is more often secondary to nasal tuberculosis than primary. The symptomatology and treatment of tuberculosis in the various other anatomical regions of the eye are discussed in detail, and the author draws the following general conclusions: It is doubtful if any case of intra-ocular tuberculosis is ever a primary disease. In cases of doubt, or of

very difficult diagnosis, the injection of tuberculin is an efficient aid to diagnosis. There is a general reaction in at least eighty-five per cent of the cases, and some local reaction in about fifty per cent. As a method of treatment both the old and the new tuberculin have proved practically useless in the writer's experience. It is a remedy which needs careful watching. Surgical intervention in intra-ocular tuberculous conditions of the eye should seldom be done, unless there is considerable pain which tells on the patient's health, because the disease is not primary, and hence excision would remove only one focus of the disease.

GYNECOLOGY AND OBSTETRICS.

Is Menstruation Physiological or Pathological?

M. Tobler (*British Medical Journal,* Dec. 23, 1905) has during the past two years examined women, with a view to ascertain as precisely as possible the influence of the catamenia on the female economy. As is the case with most previous observers, Tobler finds that in the great majority of women at the present day menstruation is associated with distinct deterioration of the general health and diminution of functional energy. In 26 per cent local pain, general malaise, and psychoses coexist; in larger proportions come those in whom general weak health, or else some psychosis or local pain, is alone experienced at the period. In 16 per cent none of these symptoms are present, and Tobler makes a separate group of 3.3 per cent in whom the mind and functions are stronger during the period. In about 3.6 per cent, constituting yet another class, this increase of strength during the presence of the catamenia is associated with distinct disturbances in the intervals. Tobler considers that the familiar disturbances during menstruation are pathological, but that the process itself is physiological. Deterioration of constitution and unhealthy habits and surroundings cause the increase of tissue change, which is part of the process, to result in toxic products prejudicial to the system, whilst normally products favorable to the economy should be evolved.

Aseptic Management of the Umbilical Cord.

J. T. Schell (*American Medicine,* Dec. 2, 1905) advises the following method for aseptic management of the umbilical cord. As soon as the child is born the umbilical cord is clamped with

a hemostat about three inches from its abdominal attachment; another hemostat is then placed a short distance from the first one toward the placental end of the cord, and the cord is then cut between. The cord and abdominal wall immediately surrounding it are carefully washed in 1-to-4000 mercuric chloride solution. The hemostat is then grasped in the left hand, and a pair of scissors in the right hand follows the skin-amniotic junction until this is severed completely in its entire circumference. Care must be taken not to cut too deeply, as the vessels of the cord are usually very close to the amniotic covering. So soon as the vessels have been exposed the amniotic covering and the Wharton's jelly is stripped away in a direction from the abdominal walls, and a ligature consisting of a piece of very fine (No. 0) sterile catgut is then thrown around the vessels, and the cord is severed close to the ligature. The stump is washed in mercuric chloride solution, dried with a piece of sterile gauze, and dusted with any good antiseptic dusting powder. The baby should not be put in the tub for about a week, but should be given a lap bath; the stump should be washed frequently in a boric acid solution and a small amount of dusting powder used, with the usual sterile pad and the abdominal bandage.

Temperature During Menstruation.

E. Franck (*Berliner klin. Woch.*) calls attention to his previous announcement, that fever during menstruation is a symptom of some morbid process in the body. It is especially indicative of tuberculosis, and if the patient is anemic, with a tendency to sweat, antitubercular treatment should be inaugurated. The author states that the normal temperature never exceeds 99.5° F., and even a fraction of a degree above this is to be regarded as fever. Sabourin and Kraus have also reported this condition, and state that if inflammatory conditions of the adnexa can be excluded it is indicative of tuberculosis.

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ORIGINAL CONTRIBUTIONS.

THE MORE SERIOUS COMPLICATIONS OF LA GRIPPE OR INFLUENZA.

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It is my purpose merely to present some clinical observations made by myself in connection with this ailment, as I have observed it since its reappearance in this hemisphere, in 1889. As, too, it has since seemed to have become fixed in our land, through its recurrence every winter for the intervening decade and a half, I take it that every clinician with wide opportunity for observation, whether in public or private practice, has noticed these same events.

Primarily, it appears that the public, and quite a body of medical practicians as well, regard grippe as a joke rather than otherwise. But this is the very thing which experience has disproven to me, and which I believe ought to be fully impressed upon the laity by professional sentiment, broadly expressed. Indeed, often do I hear the phrase, "I had the grippe and have never *fully* recovered from it," but to me it is altogether ominous of distress and mischief.

One of the primal results of grippe which was impressed upon me early was not simply the usual debility which accompanies most of our cases, and which seems out of all reasonable proportion to the appreciable conditions presenting, but its indefinite persistence and extreme degree in quite a good many cases. These patients, wholly without regard to age or previous vigor, are as limp as rags—too feeble for any movement or exercise beyond the minimum vitality required to stay alive. This one element of debility—passive existence alone—is profound, and the sole cause for uneasiness. Instead of recovering within ten days or a fortnight, most of these sufferers linger for weeks,

sometimes even for months; and not a few live on for a year or two, to die of sheer exhaustion at last.

I particularly recall the medical director of a prominent life insurance company in this connection, who experienced just such effects of grippe every year for four successive seasons. In the last attack he visited my city, *en route* to Florida, for rest and recuperation, and was my patient for a brief period, going and coming. Although he was a little past the half century in age, he had been quite a vigorous man all his life; and his age did not at all account for the exquisite lifelessness of the patient. But he was simply too weak for anything. He said to me, "I must never, never have grippe again, and shall run away from it next time." While perfectly clear in his mentation, he was indisposed even to think, and his mind was about as debilitated as his body. There was no cough, nothing left of his seizure except the desperate depression of vitality. He lingered four or five months longer, and died, utterly worn out—beyond the possibility of recuperation. This is but one of numerous similar instances which have come under my observation, some of them in childhood and youth. The pulse in these cases may be either subnormally low, or may show tachycardiac features, but is characterized by its smallness and its threadlike feebleness; the respiration is shallow and weak, sometimes sighing, but without pulmonary changes; the temperature is perhaps normal, seldom feverish, and generally below par; and these are about the only objective features.

The next condition, often occurring by itself, is marked by extreme nervousness. This sometimes goes hand in hand with the condition just described—giving us, then, a double manifestation of neural dejection. Frequently, however, the nervous feature is dissociated from the weakness of vitality happening in the preceding state, but is quite as extreme in its way. These victims are fidgety, uneasy, tremulous, apprehensive, forgetful, despondent sometimes, altogether changed in characteristics from their normal selves by the grippe attack. They suffer often from insomnia, occasionally from stupidity, the former being the general state. And there is no safe limit for prognosis as to when the sufferer shall regain normality of nerve equipoise. The centers of neural activity and coördination seem overwhelmed into extreme instability by the poison or shock of the grippe seizure. There is no special change of temperature, but breathing as well as circulation sympathizes with the neurotic status, and is generally rapid or irregular, or both.

A third condition, not very frequent, but seen often enough to impress the clinician, is marked mental involvement, occasionally amounting to prolonged delirium, to stupor little short of coma, to hallucination during or even after convalescence from the real attack, and rarely to mania, or continuing insanity. In none of these forms, however, has it been my lot to notice a permanency of the condition—all cases which fail of dissolution through the very intensity of the original grippe attack ultimately recover normal mental stability, or nearly so. Some may have severe recurrent headaches or other neural explosions afterward. But I have been fortunate enough not to have encountered permanent unbalancing of reason after grippe; yet I am sure such an event might occur at least to the already predisposed. My personal experience warrants me in assuring these afflicted people, and their relatives, of the ultimate recovery of mind, no matter how greatly unbalanced may be the patient at the time. As to duration, however, I am too cautious to set any date for the termination of the derangement. Some of the patients seem to me bordering on the common delirium of alcoholism, only the poison being different. I have seen the milder kinds of mania continue for weeks, or recur at irregular intervals for two or three months. But despite the apparent malignancy of the outlook in such cases, it is my pleasure to do business with a number of such patients of the long ago who are well and sound and happy after such escapes at the present time, and have been well—most of them—for several years.

Not seldom does it happen that neuritis is the heritage of the grippe victim. This may involve a single nerve trunk; or it may be wide-spread multiple neuritis involving paralysis of both lower extremities; and exquisite lightning pains sometimes, according to the location of the involvement, and whether sensory or motor structures suffer, or both. A prominent member of this association now present here can testify to the exquisite suffering and inability from the foregoing condition; and while he is nearly himself again, after three years of convalescence, he is not quite as vigorous as before, and it is possible that he never will be. Two other of my colleagues have experienced similar neural disabilities under my observation and treatment at different times. And still another, after complications almost innumerable, as sequelæ of grippe, and after two years of heroic struggle for mastery of his ailments, sleeps his last sleep, vanquished after all by this mysterious and sometimes malignant affection.

A number of cases among the laity have likewise fallen to my

lot, manifesting these forms of neural inflammation, or spinal inability.

That all clinicians of wide observation, and many of limited opportunities, have witnessed diverse forms of hysteria resultant from influenza I take for granted from my own experience; likewise that no small number of pelvic involvements, particularly showing influence by menstrual disorders of more or less gravity, can undoubtedly be confirmed by our gynecological brethren. So, too, pelvic derangement is every now and then signaled by dysentery and by periuterine ills of considerable chronicity. Cystitis and cystic paralysis in both sexes are sometimes met with. Renal inflammations, however, I confess to so rarely have come across that I can now recall but a couple of cases, and they were of little intensity or importance. Quite likely, nevertheless, it is because we do not look for these involvements that they escape our detection.

One of the most impressive and rare complications of la grippe which I recall ever having seen consisted in extreme clonic spasmodic seizures, particularly involving the heart, diaphragm, and muscles of respiration, with perfect mentation during it all, but giving rise to the most pitiable agony of fear of impending death. This patient, too, was an intelligent physician, who fully realized his danger, and therefore begged to be saved from such a horrible death. He recovered finally under the administration of powerful antispasmodics, but was in undoubted danger of dissolution, resembling that from tetanus, for nearly forty-eight hours, though gradually lessening in intensity after I first instituted treatment. He lived in mortal dread of any future attack of grippe lest he suffer a recurrence of this malignant feature.

Serious pneumonias from grippe infection, or resultant afterward from the lowered vitality thus caused, I hardly need mention. I am sure the whole profession is duly alert on this subject; hence I shall not dwell upon this feature of influenza mortality and danger. I merely wish to mention that while common fibrous and catarrhal pneumonias are often seen in this disease, I have been impressed with a peculiar form of pneumonia which I do not remember ever to have seen otherwise. The involvement, while clearly fibrinous in character, as proven by the symptomatology, is not uniform over a considerable area of the lung, as we see in ordinary lobar pneumonia, but involves only small patches of the respiratory organ, solidifying little areas here and there, generally grouped closely, so as to remind

one of bunches of grapes strung together; here a few air cells consolidated completely; next a resonant area; then more consolidation; again clear, more or less; and so on to the extent sometimes of an entire lobe, or more, not seldom involving both lungs to a degree, and spoiling the involved spongy tissue for respiratory purposes. At the same time there do not exist the customary symptoms of catarrhal pneumonias such as we find in other diseases, bilateral in extent, as well as symmetrical manifestations. To me these strange pneumonias are impressive and interesting. And I find other observers have been similarly struck with these bunches of grapes in the pulmonary organs, while it does not yet appear to have become a common matter of observation.

Rheumatism, or at least rheumatoid manifestations, happen occasionally from grippe, but are not of such frequent or severe extent as to deserve emphasis at my hands. Meningitis, even fatal, has come under my observation, which seemed clearly attributable to this insidious infection, especially happening in childhood or infancy. I saw one case in an infant barely two months old in which the attending physician was quite positive that the origin was in the prevalent influenza epidemic; and he was a close observer, and more than ordinarily competent and capable.

Pleuritis has happened a number of times under my observation immediately subsequent to, or even coincident with, a grippal seizure; and the conviction has been forced upon me that the former was directly resultant from the latter. I believe, indeed, that all serous and synovial membranes may be involved by the poisoning of grippe, and that a serious, or even fatal, inflammation may happen as complication or sequel thereof. A very recent and pathetic case occurs to me of a vigorous young patient in the full bloom of early manhood, with a history of never experiencing a seriously sick day in his life (and I had personally known him both as child and man, almost from his very birth), who went down with a plain case of la grippe, manifesting the usual symptoms, and progressing favorably for the first few days toward apparent recovery, when suddenly a pelvic pain, or rather a left iliac agony, occurred, to which my immediate attention was called very soon after its inception. Had it been upon the opposite side I might have thought it appendicitis from its ensemble manifestations. But I said to the friends at once, "This is strongly suspicious of localized peritonitis, which I fear. I will decide further in the morning." This was about dusk, in

the afternoon. The next morning I had no hesitancy in saying general fulminant peritonitis, such had been the rapidity of its spread; and about 2 P.M. of the same day he died from unmistakable septic peritonitis with its attendant profound shock.

Very briefly, lest I transcend the limit of time for my paper, I will say, in passing, that hepatic involvement, even to the extent of cholemia and fatality, not infrequently happens from grippe. So often have I met such cases that I assume it to be the experience of all other observers, and therefore not specially necessary for discussion at present. So, too, protracted and malignant anemias occur often enough, though comparatively rare, to impress us with the involvement of the hematopoietic system, and the importance of looking carefully after its integrity in handling grippe epidemics and their resultant pathological conditions.

This leads me to a class of cases which I suspect have never yet received sufficient attention at the hands of the profession, though I occasionally notice reference to them by observers. Passing over chronic involvements of the throat, bronchi, and air-passages, because these are generally recognized, and especially the danger and the actuality of secondary tuberculosis, with its numerous victims, for the same reason, I come to consider cardiac affections secondary to influenza. Of these, it has been my personal experience to run across quite numerous instances, and many of them have shown such a gravity as to endanger life for prolonged periods, when not shortly fatal *per se*. Indeed, some of these patients never wholly recover, but carry crippled hearts the rest of their lives.

So numerous have such instances been under my own observation as to lead me to the conclusion that grippe certainly causes quite as many chronic cases of cardiac disease as rheumatism, and the latter gets credit for involving the heart in forty per cent of all of its cases. I do not believe that grippe causes heart involvement in that proportion of all influenza cases by any means; but as grippe affects nearly all of the inhabitants as it sweeps over the country as a pandemic, from season to season, it probably leaves behind it as many crippled hearts in totality as rheumatism does in the same length of time. And I only ask my confrères in the profession to observe closely regarding this in their heart cases from now on, to feel pretty confident that histories of cases hereafter obtained, on close questioning, will demonstrate my claim.

Pericarditis, while it is rather unusual and the least frequent of these happenings, confronts us occasionally; anyway, often

enough to deserve recognition for grippe as an etiological factor in the inflammation of heart investment—the "outside" disease of that organ.

But when we come to consider the etiology of endocarditis, I am every way confident of the correctness of my premises when I insist on its quite frequent happening. I have met it too often myself to mistake its frequency or its gravity, if it be only looked for in our analysis of the general run of grippe cases, as we do in this connection in simple rheumatic cases. And the same with regard to carditis proper. Both of these ailments result from the influenza poison and shock far oftener than is thus far realized by the general profession.

I shall not take up your time with the often decidedly obscure symptomatology of both of these affections. I refer you to your best text-books for refreshment upon this subject. But it has surely been my experience, both in my own personal work and in consultation practice with numerous other practitioners, both in city and country, in public and in private work, to run across relatively many of these serious cardiac involvements. They threaten the existence of the patient immediately in many instances; they confine other persons to bed absolutely, sometimes for a month or two, to insure recovery; and they always present the probability of persistence indefinitely, threatening the life of the invalid for years afterward in many of the best cases; hence I approach them with fear and trembling as to ultimate issues, no matter how remote thereafter. As a rule they are likely to pass unrecognized, and especially on the part of a superficial or inexperienced observer. But when looked for and signaled by bruits, cardiac irregularities, unaccountable general weakness, or particularly heart staggering or feebleness, often shown in a thready pulse, by breathlessness on exertion, no matter how little, by either tachycardia or bradycardia, or other manifestations of extreme cardiac feebleness, do not fail to suspect the heart's integrity, and look carefully after same. And even in the absence of manifest symptoms do not forget my warning, here and now, but regard the heart with anxiety, and make assurance doubly sure by confining your patient to bed absolutely, and restricting him in every manner to comport with your suspicion. No serious harm can result from overdoing the matter, while ultimate fatality may come from laxity or indifference. Better err on the right side than contrariwise always.

It is not my purpose at all to suggest treatment for the vari-

ous complicating ills of grippe hereinbefore specified. This may wisely be left to the individual observer, carrying out his own personal ideas of therapeutics as each exigency arises. But it is my intention to emphasize the fact that serious, threatening, and not seldom fatal, complications or sequelæ of influenza occur much more often to practicians than authorities at present seem to indicate, or the profession to fully realize, so far as my reading and observation extend. And with such an experience in my own limited sphere I feel confident that a general warning upon this subject is not out of place; for I have often run across these serious characteristics in consultation practice, where the doctor in charge was either puzzled at symptoms presenting, or misled altogether by overlooking the gravity of the particular pathological state, or unwarrantably confident of final issues, through his opinion of the inconsequential nature of grippe in all of its manifestations. In other instances the influence of grippe seemed to be overlooked; but in a majority of cases the underlying elements of confidence and danger had not been differentiated at all, especially in serious heart cases, with malignant debility both of circulation and general vitality. Briefly put, my object is to sound the note of danger; to awaken my colleagues to the frequency of complications, and insist on their prompt recognition for the patient's safety and subsequent welfare; and to proclaim that grippe, even in cases beginning as trivial seizures, should always be regarded with suspicion and apprehension, and classed as one of our dangerous diseases instead of merely a slight and passing ailment; and the general public should be taught to consider it accordingly, and as certainly causing as wide-spread mischief and results as our more common typhoid and other fevers.

ANENT THE FREEDOM AND LIBERTY OF THE PRESS.

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While in the minds of those capable of adequately understanding, appreciating, and interpreting the situation no reasonable doubt can exist anent the pernicious influence exerted in various directions by the ever-increasing freedom and liberty assumed by the daily press, it is exceptional that a contributor of prominence to any department of literature possesses the requisite temerity to demur, or to assume the risk of incurring its enmity by openly criticizing its arrogance, its despotism, the utter and absolute disregard of respectability or even common decency which it displays in parading before the public gaze

exaggerated and distorted minutiæ of actual or imaginary occurrences within domestic circles and the privacy of individual life.

It certainly cannot be gainsaid that because of its assumed liberty and freedom the daily press has become a distinct menace to the welfare, peace, and happiness of respectable individuals and to the community at large—instead of what it purports to be, *pro bono publico,* an institution of education and enlightenment for the masses; yet its opprobrious attitude toward the individual and the public, its sensational, mendacious propensities, the utter absence of a semblance of truth, honesty, or even ordinary decency observed in its utterances, are apparently allowed to pass unobserved.

This attitude of *laissez faire* on the part of the public, and the consummate apathy exhibited by the individual, are difficult of understanding, inasmuch as the statute books of at least a majority of the States contain legal enactments which assume to govern the conduct of public and private institutions in their relation to the commonwealth, and because of continued disregard and wanton violation of which it would appear that the editors and proprietors of the newspapers should be clearly amenable. Prompt arraignment, conviction, and punishment are expected to follow wilful disregard or violation of many lesser statutes which have for their object the government and regulation of the individual and his attitude toward the commonwealth. Therefore where is the justice, *de jure* or *de facto?*

Most assuredly the incontrovertibleness of the fact has long since been established that the press enjoys too great freedom, that it has usurped too many privileges, that its assumed liberties have far transcended the limitations and restrictions which the intent and letter of the law sought to impose, that the statutes have been and are being wantonly, wilfully, and openly transgressed to the irreparable injury, *inter alia,* of public morality and individual safety; yet because of evident indifference on the part of the great commonwealth toward this villainous violator of the statutes, this reviler of persons, this sensational, falsifying, vituperative pretender of public education and enlightenment, the individual hesitates to institute legal proceedings which have for their ultimate object preservation of the first principle of human existence, viz., self-protection!

As an example let it be presumed there is a report current that a young girl has been accosted by a joker, a robber, a tramp, a villain, in a spirit of deviltry, for the purpose of robbery, murder, rape, or other bodily harm. It matters not what may have been the determining incentive, the circumstances, the conditions

surrounding the encounter, or even whether or not a crime was actually intended or committed, the daily press flaunts before public gaze an exaggerated account of all the disgusting minutiæ with flashing headlines, usually accompanied by illustrations of the real or supposititious participants and the topography in detail of the supposed scene of action!

In view of the present indifference on the part of the great commonwealth represented by prevailing public opinion, what possible redress is there? What assistance can reasonably be expected from either the public or the judiciary tribunal in attempted prosecution of the daily press, even though the fact be clearly substantiated that it is distinctly *particeps criminis* if not the principal offender?

What legitimate right has the press to invade the privacy of the home and publicly rehearse private scandals, be they new, true, or otherwise; to present to the public gaze illustrations of persons without their knowledge or consent; to publish vituperative, false, indecent, slanderous, defamatory declarations concerning individuals, high or low, rich or poor, whether such statements be founded upon facts, circumstantial evidence, or wholly manufactured for the occasion? That such scurrilous utterances almost daily appear in the press can be easily verified, yet for reasons previously indicated the individual appears not to possess the adequate temerity to demur.

Certainly where invasion of the home, vituperation, the dissemination of indecent and licentious information, and the public rehearsal of strictly private and personal affairs begin, the liberty and freedom of the press must necessarily cease; and the newspaper which deliberately or otherwise publishes a lie or other derogatory statement concerning any person whomsoever should be promptly punished under the criminal statute.

At present, however, the press assumes all the characteristics of a despotic sovereignty; it invades the privacy of the home, the business, the life of any individual whom it may seek to defame, injure, or destroy; it is arbitrarily relentless in its pursuit of damaging or incriminating information, and in the presentation thereof it grants no credence to extenuating circumstances, it admits of no argumentation, it permits no compromise. But the most opprobrious and unfortunate feature entailed in the proposition is that oftentimes the statements which appear contain not one iota of visible truth, or, if the slanderous assertions have a material basis, the actual facts are juggled, distorted, and magnified until the proper degree of sensationalism is reached, depending upon the imaginative genius of the repor-

ter, the prominence of the individual attacked, and the result sought to be accomplished. Hence, so far as the ultimate outcome is concerned, it matters not whether the declarations be founded upon facts or fancies.

While at present there appears no limitation to the assumed liberty and freedom of the press, and while it would seem clearly culpable under the criminal statutes when it rehearses before the public the private affairs of individuals, when it invades the sanctity of the home and seeks to expose real or imaginary scandal, when it villifies, defames, and slanders, it may be remarked *en passant* that there are other palpable causes of action which likewise seem to have been allowed to pass unobserved—*e.g.,* careful scrutiny will reveal the indisputable fact that scarcely a single edition could pass muster under the most liberal interpretation of the statutes governing the circulation of obscene literature; moveover, in nearly every issue may be found the advertisements of abortionists and those engaged in other questionable pursuits where the press is essentially *particeps criminis* under the statute.

In granting freedom to the press certainly the lawmakers did not contemplate including the liberty of using the mails for the purpose of distributing and disseminating obscene literature, and therefore no right or privilege of the press is infringed upon by the exclusion of obscene matter from the mails; the only stipulation imposed is that the press shall not print or publish that which can be classified as obscene, to insure its uninterrupted transmissibility as current mail matter.

In this connection a few epitomized extracts from some of the revised statutes which are presumed to govern the printing, publishing, and mailing of obscene literature, the printing of police and criminal news, the advertising of prohibited pursuits, articles, etc., etc., may not be entirely devoid of interest, even if such legal enactments are apparently inoperative or at best ineffective.

"It shall be unlawful for any person to sell or offer for sale, or to print or publish, or to bring into the State for the purpose of selling, giving away, or otherwise disposing of, or to circulate, or aid in circulating, in any way, any paper, book or periodical, the chief feature or characteristic of which is to record the commission of crimes, to display by cuts or illustrations crimes committed, the actors, pictures of criminals, desperadoes, fugitives from justice, and cuts or illustrations of men and women in improper dress, lewd and unbecoming positions, or men and women influenced by liquors, drugs, or stimulants. Any person

guilty of a violation of this section shall be fined not less than twenty-five and not more than two hundred dollars.

"Any person or corporation who sells, lends, gives away or shows, or offers to sell, lend, give away or show, or has in his possession with intent to sell, lend, give away, or to show, or advertises in any manner, or who otherwise offers for loan, gift, sale, or distribution, any obscene, lewd, lascivious, filthy, indecent, or disgusting book, magazine, pamphlet, newspaper, story-paper, writing, paper, picture, drawing, photograph, figure or image, or any written or printed matter of an indecent character, or any article or instrument of indecent or immoral use, or purporting to be for indecent or immoral use or purpose, or who designs, copies, draws, photographs, prints, utters, publishes, or in any manner manufactures or prepares any such book, picture, drawing, magazine, pamphlet, newspaper, story-paper, writing, paper, figure, image, matter, article or thing, or who writes, prints, publishes, or utters, or causes to be written, printed, published, or uttered, any advertisement or notice of any kind, giving information, directly or indirectly, stating, or purporting so to do, where, how, of whom, or by what means, any, or what purports to be any, obscene, lewd, lascivious, filthy, disgusting or indecent book, picture, writing, figure, image, matter, article or thing named in this section, can be purchased, obtained, or had:

"Any person or corporation who prints, utters, publishes, sells, lends, gives away or shows, or has in his possession with intent to sell, lend, give away or show, or otherwise offers for sale, loan, gift or distribution, any book, pamphlet, magazine, newspaper or other printed paper devoted to the publication and principally made up of criminal news, police reports or accounts of criminal deeds, or pictures, or stories of deeds of bloodshed, lust, or crime:

"Any person or corporation who is guilty of a violation of the previous sections, or either of them, or who in any manner hires, employs, uses, or permits any minor child to do or assist in doing any act or thing mentioned in these sections, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be sentenced to not less than ten days nor more than one year's imprisonment, or be fined not less than fifty dollars, nor more than one thousand dollars, or both fined and imprisoned for each offense:"

NOTE.—The provisions of these sections shall not be construed so as to apply to works of a scientific character on anatomy, surgery, and obstetrics, or other scientific publications, nor shall

publishers or book dealers be prevented from issuing and selling such works.

"No obscene, lewd, or lascivious book, pamphlet, picture, or paper of indecent character, nor any written or printed card, writing, book, pamphlet, or advertisement giving information as to how or where abortion may be obtained or performed, shall be accepted for transmission through the mails. Any person who shall deposit such printed matter in the mails shall be guilty of a misdemeanor, and shall for every offense be fined not less than one hundred dollars nor more than five thousand dollars, with imprisonment at hard labor for not less than one year nor more than ten years. Every obscene paper of any nature whatsoever shall be declared to be non-mailable matter.

"Any person who (1) sells, lends, gives away, or offers to give away, or shows, or has in his possession with intent to sell or give away, or to show, or advertises, or otherwise offers for loan, gift, sale or distribution, any obscene or indecent book, magazine, pamphlet, newspaper, story-paper, writing, paper, picture, drawing, or photograph, or any article or instrument of indecent or immoral use, or who designs, copies, draws, photographs, prints, utters, publishes or otherwise prepares such a book, picture, drawing, paper, or other article, or writes or prints, or causes to be written or printed, a circular, advertisement, or notice of any kind, or gives information orally, stating when, where, how, or of whom, or by what means such an indecent or obscene article or thing can be purchased or obtained:

"Or (2) who sells, lends, gives away, or shows, or has in his possession with intent to sell or give away, or to show, or advertises or otherwise offers for loan, gift, sale, or distribution, to any minor child, any book, pamphlet, magazine, newspaper, or other printed paper devoted to the publication or principally made up of criminal news, police reports, or accounts of criminal deeds, or pictures and stories of deeds of bloodshed, lust, or crime:

"Or (3) who exhibits upon any street or highway, or in any other place within the view, or which may be within the view, of any minor child, any book, magazine, pamphlet, newspaper, writing, paper, picture, drawing, photograph, or other article or articles coming within the descriptions of articles mentioned in the first and second subdivisions of this section, or any of them:

"Or (4) who in any manner hires, uses, or employs any minor child to sell or give away, or in any manner to distribute, or who, having the care, custody, or control of any minor child, permits

such child to sell, give away, or in any other manner to distribute any book, magazine, pamphlet, newspaper, story-paper, writing, paper, picture, drawing, photograph, or other article or matter coming within the descriptions of articles and matter mentioned in the first and second subdivisions of this section, or any of them, is guilty of a misdemeanor.

"Any person who sells, lends, gives away, or in any manner exhibits, or offers to sell, lend or give away, or has in his possession with intent to sell, lend or give away, or advertises or offers for sale, loan or distribution, any instrument or article, or any drug or medicine, for the prevention of conception, or for causing unlawful abortion, or who writes or prints, or causes to be written or printed, a card, circular, pamphlet, advertisement or notice of any kind, or gives information orally, stating when, where, how, of whom, or by what means, such an article or medicine can be purchased or obtained, or who manufactures any such article or medicine, is guilty of a misdemeanor.

"Any person who deposits, or causes to be deposited, in any postoffice within the State, or places in charge of an express company, or of a common carrier, or other person, for transportation, any of the articles or things specified in the last two sections, or any circular, book, pamphlet, advertisement, or notice relating thereto, with the intent of having the same conveyed by mail or express, or in any other manner, or who knowingly or wilfully receives the same, with intent to carry or convey, or knowingly or wilfully carries or conveys the same, by express, or in any other manner except in the United States mail, is guilty of a misdemeanor."

NOTE.—In most instances when not otherwise specified by the code, a misdemeanor is punishable by imprisonment for not more than one year, or by a fine of not more than five hundred dollars, or by both.

"Any person who within the District of Columbia or territories, or any other place within the jurisdiction of the United States sells, lends, or gives away any obscene paper, book, pamphlet, etc., shall be imprisoned at hard labor in the penitentiary for not less than six months nor more than five years for each offense, and fined not less than one hundred dollars nor more than two thousand dollars with costs."

NOTE.—Medical and surgical books and instruments not intended to be included in any of the statutes excerpted. In other words, the law does not presume to place an embargo upon the advancement of education in any of the ramifications of science.

While the intents and purposes of the statutes herein epitomized are unmistakably plain, the prosecution, conviction or punishment of the editor, owner, or publisher of a newspaper for violation thereof is almost unheard of so far as can be ascertained, hence the statement that present laws, while perhaps not altogether inadequate, are inoperative, or at least ineffective.

From a strictly legal standpoint the proprietor, the owner, or the editor is responsible for every item which appears in his paper, with or without his knowledge, and as the statutes which assume to govern and regulate the printing, publishing, and distribution of criminal and obscene literature, the advertising of prohibited pursuits, professions, articles, institutions, etc., etc., are specific and plain, the query quite naturally suggests itself, Why cannot these laws be enforced and the penalties imposed? Why is the *noli me tangere* attitude almost universally observed?

With especial reference to the questionable advertisements which appear in the daily press, such as abortifacients, the addresses of professional criminal abortionists, baby farms, *et al.*: It has been tritely stated that the publisher will usually incur the risk of inserting in his paper an advertisement of almost any character provided he who desires it is willing to pay the price. There can certainly be no misunderstanding as to the nature and character of announcements like the following, some of which are to be found in almost every issue of daily newspapers published in any of the large cities:

Ladies in trouble will not regret calling at No. —— Street, ——. Mrs. K., midwife, receives married or single ladies in trouble. . . . The Blank Sanitarium, perfect secrecy and seclusion; treatment of female diseases a specialty; satisfactory results guaranteed. . . . Immediate relief for ladies sent in sealed envelope by return mail for one dollar. . . . Attention ladies! Blank's pills are the best, take no substitutes. . . . The complaints and irregularities peculiar to women successfully treated by old Doctor Blank at his private sanitarium. . . . Mrs. C. begs to announce the removal of her elegant massage parlors from No. —— Street to No. —— Street, where she will be pleased to welcome those who require her services; special rates to newcomers for a limited period; the ailments peculiar to women will as usual receive especial attention. . . . Ladies who are in trouble should consult Doctor Blank, graduate physician, thirty years' experience, whose institute is located at No. —— Street; no charge for consultations; babies adopted if desired and no questions asked; *ad libitum, ad nauseam.*

In plain English the intent and meaning of all these adver-

tisements is: If as a female human being, married or single, you are so fortunate or unfortunate as to be pregnant, and if you desire that a criminal abortion be performed, if you will kindly call at the number and street specified, a person will there be found who is willing to contract for the wilful murder of an innocent babe *in utero* upon the payment of a stipulated sum in advance, and no questions need be answered. Or if you have so far advanced in uterogestation that its termination would be inadvisable, for a stipulated amount to be paid in advance you will be attended during the parturient period, and the baby at your option can be disposed of, farmed out, or adopted (?).

By the publishing of such announcements, advertisements, or cards, is not the daily press guilty not only of a misdemeanor but also the graver crime of compounding a felony? Is it not premeditated murder to deliberately kill, at any stage of its existence, the fetus *in utero,* a *terræ filius,* and does not the daily press at least merit punishment under the statute as *particeps criminis* for indicating the location of institutions in which homicide (criminal abortion) may be secured for a consideration, for directing those who are perhaps ignorant of the law to such dens of iniquity?

In discussing the effects of impure literature Scott has the following to say: "It (the daily press) is on the other hand too often the vehicle of untruth, slander, impurity, sensationalism, indecency, and licentiousness. . . . Too often they (the daily papers) spread to a deplorable extent the inmost details of private scandal, of family misfortune, of crime, filth, and wickedness of all sorts. If any unfortunate one has made a misstep, or attempted suicide, or been the victim of some unusually calamitous circumstance, the published details, while injuring a certain class of readers and doing good to none, often make it impossible for that individual to recover his standing, or to remain in his accustomed locality. . . . By its advertisements the press pretty generally gives to the public such information as will seemingly help them to escape the consequences of licentiousness, by referring them to charlatans, abortionists, and 'baby farmers.' . . . The daily press is largely responsible for the increasing frequency of this crime (criminal abortion) by permitting the obscene advertisements of charlatans and abortionists to appear, disgustingly aiding in the work of criminal malpractice and being most efficient accessories in this abhorrent iniquity of fœticide" (J. F. Scott, M.D.: "The Sexual Instinct," pp. 163 and 276).

Even Lombroso comments upon the frequency of criminal abortion in this country in the following language: "Another occasional offense specifically local is abortion in the United States, where it is so diffused that public opinion has ceased to condemn it; in proof we have the advertisements of doctors (?) and female midwives who practice chiefly in this branch and recommend their establishments in newspapers and on posters (Lombroso: "The Female Offender," quoted by Scott, *loc. cit.*).

In an editorial on the "Daily Press in Relation to Crime," one of our leading medical journals remarks: "That elaborated, exaggerated, even truthless reports, with flashing headlines and other conspicuous accompaniments detailing every murder, suicide, hanging, seduction, attempted rape, elopement, robbery, scandal, divorce, etc., etc., are accorded simultaneous publication in almost every great secular daily of the country—to poison the public mind, corrupt public morals, to act by the influence of example upon the morbid and melancholic as an incentive to the commission of other similar crimes, to suggest to and familiarize the public with the *modus operandi* by which such crimes have been committed, thus stimulating and perpetuating lawlessness, licentiousness, and the customary concomitant evils and inevitable sequelæ, especially in those individuals possessing susceptible, excitable natures and inherent criminal tendencies—appears in the nature of a national calamity, which should by some means be suppressed. The evil has been nourished and stimulated until such reports are now generally considered as legitimate reading matter; they are published even to the minutest detail, such as would obtain were the composite matter related to some scientific, hygienic, or sanitary subject; and in this fact lies the most unfortunate feature. Little harm would perhaps result if only brief notices were inserted, but it is the unlimited freedom exercised, the minuteness of detail as to the method employed in the commission of crime, the exaggeration depending upon the imaginative genius of the reporter delegated to this class of work, which must be recognized as the most deplorable constituent. . . . He (the publisher of the daily press) apparently has no interest in trying to educate the public on other and better lines. Is the public, then, in a state of progressive degeneracy; and if so, is not the daily press largely responsible for the retrogressive metamorphosis? The daily newspaper reaches all classes of society, from the highest to the lowest; it is perused by wives and children, though often more demoralizing and productive of more evil than the foulest yellow-covered monstrosity ever perpe-

trated by the ingenious imagination of an irresponsible author; yet the daily press is admitted to every home in the community and received with open arms, while the lesser evil, the yellow-backed literature, is denied admittance. While we would not be understood as advocating or encouraging questionable literature in any form, or favoring its introduction into the home and extensive circulation in this or any other country, we contend that, judged by its pernicious effect upon the morals of any community, the daily press is the chief offender. As an incentive to suicide, the effect of the daily press may be emphasized by the following: Recently, in a neighboring city, a man aged fifty-seven years, being despondent, out of work, and 'tired of life,' committed suicide by swallowing a quantity of carbolic acid. The morning's paper published the customary two- or three-column account of the unfortunate circumstance, with flashing double 'scare' headlines—chiefly gratuitous on the part of the ingenious and imaginative reporter, life being extinct when the suicide was discovered, so that facts were absolutely unobtainable. What was the result? In this same city, during the next succeeding seventy-two hours, five additional human lives were cut short by identically the same method, plus in some instances the additions outlined by the reporter, the subjects ranging in age from nineteen to sixty-five years. Is not, then, the assertion warranted, that the depressing effect of the glaring, published account of the first suicide upon the morbid and impressionable minds of the additional five prompted them to end their existence and to adopt the same means; and may we not also assume that in the first instance the man in a fit of despondency was actuated to the deed by having read in the daily press the report of a suicide by similar measures? . . . Is not the public press thereby guilty of a degree of murder? Can it be doubted this is the influence that causes suicides to so frequently follow each other in quick succession, especially when it is found the death-dealing method, and even the anatomical region attacked, is identical in each instance? Surely such instances are of too frequent occurrence to be considered merely matters of coincidence! And this refers with equal force to a long list of crimes. . . . and is it not true that no small percentage of these reports are entitled to be classed as obscene literature, and thus be brought under the jurisdiction of laws governing such matters? . . . And yet the most pernicious issues of the secular press are accepted for general and local transmission through the regular mails, whereas the same literature in another form would be

rejected and the parties offering it prosecuted" (MEDICAL AGE, Detroit, Mich.).

En passant, it is interesting to observe that, in considering the possible influence of the daily press as an incentive to suicide, the Medical Society of Berne, Switzerland, has made the suggestion that an act be formulated forbidding all press notices of suicides, inasmuch as it has been repeatedly observed that *felo-de-se* epidemics arise from suggestions afforded by reports of the sensational general press. And a bill was at one time introduced in the legislature at Washington, D. C., which, had it become a law, would have made all newspapers and other periodicals unmailable when they contained stories of suicides or details relating thereto, beyond the simple statement of death by suicide, and imposing a suitable penalty for violation. (The writer is unable at present to ascertain what action, if any, was taken in connection with this bill.)

In treating of the causes of suicide in children a recent writer states: "Reasoning by the process of exclusion, therefore, it would appear that the actual determining causes of self-destruction in children are extremely few in number. In the opinion of the writer there are but three sufficiently prominent to merit serious consideration, which may be stated in the sequence of their importance as follows: (1) Suggestion or example (*i.e.,* a newspaper account which the child has either read or heard discussed relating the minutiæ of a recent suicide); (2) grief, anger, and desire for revenge, because of some real or imaginary wrong (*e.g.,* corporal chastisement by parent or teacher, or even severe reprimand for some misdeed); (3) jealousy, envy, and humiliation. It is scarcely to be believed that child suicide would result from either of the latter causes without the pernicious influence of the former, and the daily press is therefore regarded as the primary and principal determining factor or incentive to the act, while the latter are merely contributing or predisposing causes" (Mapes: MEDICAL AGE, Detroit, Mich.).

Among the causes of suicide in the United States, Davis speaks of the influence of the daily press as follows: "One more factor remains to be considered, viz., the lay press. How artistically are the descriptions given with pencil and camera! How eagerly do we read the thrilling and revolting details of the case, column after column; we gloat over the horrid description. Some readers, a little warped in their nervous systems, . . . are so fascinated with the story that sooner or later they imitate exactly what they have read so hungrily; many and many a time has such

a description directly led to other suicides" (J. L. Davis: *Journal of the American Medical Association*).

Another medical periodical editorially observes: "It is well known that the mentally unbalanced are easily led by suggestions. The sight of a weapon suggests its use. A newspaper account of a suicide, with all the details, whys, and wherefores, and the minutiæ of preparation and consummation of the act, leads some one else to the thought, and another suicide is added to the list. Suicides are largely (but not wholly) epidemic. This has been noted for many years, and the publicity given them in the press of the day, while not entirely responsible for it, has a great leaning upon it. Not only is suicide itself epidemic, but the means of its commission are often the same for what might be termed the special epidemic. In the last three weeks one daily paper has given accounts of three suicides, all by the use of the pistol. In one county last year the writer knew of four suicides in three months, all by hanging. We believe if less publicity were given to these cases the result would be beneficial" (*Carolina Medical Journal*).

As already indicated the pernicious influence of the daily press, because of the freedom and liberty assumed, extends in widely diversified directions and is almost limitless in its application. In concluding this dissertation the writer desires to add one additional illustration, which is from the pen of Davis (*loc. cit.*):

"A few months ago a peculiarly horrible murder was committed in a country town near one of our large cities. The whole neighborhood was acquainted, and many of the people related through kinship to the victim and members of her family, therefore very wide-spread interest in the affair was natural. As the time for trial approached, the enterprising newspapers deputed their best reporters and artists for the work. One paper, a little more active than the rest, even established a private telegraph wire to the scene of the trial. The daily press was filled with the fullest details, descriptions, photographs of the surroundings, the suspects, victim, and others connected with the proceedings. The whole country about the little village was saturated with the fullest information regarding the case. The trial was finally completed, but the terrible results of the newspaper enterprise are not yet ended. Thus far there have been several attempts at suicide among those who have carefully followed the proceedings, and another has been driven insane. All of these crimes, I think, should be charged to the excessive unwarranted notoriety given this case through the daily press."

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

ENDOVENOUS INJECTIONS.

In the application of remedies there is a twofold differentiation. Some are given for their direct effect in curing localized lesions; others have for their intention an action on the entire organism, and these are administered in such a way that after they have been mixed with the organic juices they come into the general circulation, and so come in contact with all the tissues. While the most natural method of absorption for remedies is by the gastrointestinal route, there exist cases in which this method does not fulfil every desirable indication. In substances so administered it is noticed there are two obstacles to be surmounted before they can reach the blood: first, they must resist the action of ferments in the stomach and intestines, which may notably modify them, and then when they come to be absorbed it is not known what active portion of the remedy gets into the blood.

In recent times the administration of remedies by endovenous method has come to be practiced. There is of course nothing new in this. It was probably first practiced by Denis in 1667, who injected the blood of a lamb into the vein of a man. We should to-day disapprove of this on account of the hemolytic action of two diverse serums on the red globules. Christopher Wien, of Oxford, in the seventeenth century predicted that all remedies would one day be introduced directly into the circulation. The modern methods of injection of remedies into the veins commenced with Baccelli, who injected quinine in grave cases of malaria, but intravenous injections were practiced before this for aneurism, remedies such as alcohol, tannin, iodine, iron, and other substances being injected into the veins for the purpose of determining coagulation at the seat of aneurism.

The best point for injecting is said to be the median vein. This can easily be distended by compression. One of the advantages of intravenous injections consists in the fact that they are completely without pain. In this respect they differ much from subcutaneous injections, especially when the substances injected are irritating in kind, such as mercury. Among the substances which can be administered with advantage endovenously may be mentioned the preparations of digitalis. These are substances which are often difficult of absorption by the stomach. Another remedy pretty well adapted for this method is salicylic acid with its kindred salts. The combination of salicylic acid with caffeine is especially suited to cases of rheumatism. Maas (*Berl. klin. Woch.*) in a recent article mentions a great many substances which are suitable for injection by this method.

There is little doubt endovenous medication is going to take a more prominent place than formerly in therapeutics. The Italian medical schools, acting largely under the inspiration of such teachers as Baccelli, have evolved in the last few years an elaborate system of therapeutics based on endovenous methods. In America, where all that is beneficial and useful is quickly seized upon, there will not be wanting those who will apply these principles to their ultimate results in experimental and clinical directions.

EDITORIAL NOTES.

Advice by Telephone.

The habit some patients have of calling up their physician by telephone and asking advice is one that has perplexed medical men in regard to the charging of a fee for such consultations. Many patients seem to think that if they have a physician attending them that they are at liberty between visits to telephone for advice on any trivial point in regard to their illness and ought not to be charged a fee. An English journal relates a very curious lawsuit brought about in this manner. A very busy practitioner had in several instances been asked by telephone to give his opinion as to the continuance or otherwise of treatment of patients seen by him a day or two before. When sending in his bill he charged for these consultations like other ordinary consultations, and the patient declined to pay. The judge, after hearing several experts, decided that not only the time but also the experience and knowledge of the practitioner had to be paid

for, and that opinions given by telephone are as valuable as those given to the patient by word of mouth. The patient had to pay the costs of the action.

The Spread of Disease by School Books and Pencils.

Some time ago an epidemic of diphtheria prevailed in a small Kansas town. On investigation by the State Board of Health it was found to have been caused by the public ownership of lead-pencils. The pencils used by the schoolchildren were gathered up every night and distributed in the morning. One child contracted diphtheria, and in a few days the disease was communicated to fifty pupils by means of the pencils. This is only one instance in which infection may be spread by the use in common of pencils and books. They may act as the disseminators of the contagion of other diseases, such as scarlet fever, measles, or even tuberculosis. A French physician who was interested in this subject recently made a series of investigations to establish the duration of infective power in various bacilli, finding it to range from forty-eight hours for some to fifty days for the Eberth and 103 days for the Koch bacillus. It would seem to be pretty thoroughly established that the method of using schoolbooks and pencils in common is too dangerous to be continued.

Sunday a Day of Rest.

Physicians in this country will look forward with interest to the outcome of a plan inaugurated by the Frankfort Medical Society whereby its members hope to be relieved of Sunday and holiday work. The society proposes to divide the city into seventeen districts, and for each district a physician will be assigned each Sunday or holiday to care for any one who desires the services of a doctor. This allows the other physicians of the city to do as they please with their time. The physicians on duty obligate themselves to promptly mail to the attending physician a printed form filled in so as to briefly describe the most important features of any calls made on strange patients. Such a scheme if it can be proven feasible would be welcomed by physicians practicing in cities in this country. The average general practitioner finds it hard to ever get a whole Sunday's rest. The plan is worthy of a trial.

ITEMS AND NOTES.

YELLOW FEVER is now said by the sanitary authorities of Havana to be extinct in that city.

THE third International Congress of Medical Electrology and Radiology will be held at Milan this year from September 5 to 9.

SMALLPOX, which has been prevalent in Tamaqua, Pa., has now caused the closing of schools, churches, places of amusement, etc.

VIENNA is considering the establishment of a hospital which will cover about 2,400,000 square feet of ground and cost in the neighborhood of $8,000,000.

PROFESSOR KOCH is said to have decided to apply the Nobel prize recently awarded to him to the publication of a complete edition of his scientific writings.

LOS ANGELES is planning to obtain its future water-supply from the Kern River, nearly two hundred miles away, at a cost of more than thirty-six millions of dollars.

WITH the close of the year 1905 Dr. Walter Lester Carr, who for five years has been editor of the *Archives of Pediatrics,* retired from official connection with that journal.

THE cross of Commander in the Greek Royal Order of the Redeemer has been conferred on Dr. Adam Politzer, the distinguished professor of otology in the University of Vienna.

DR. R. BURTON-OPITZ, adjunct professor of physiology at Columbia University, who has for some years been the American editor of the *Biochemische Centralblatt,* has also become American editor of the *Bio-physikalische Centralblatt* and of the *Hygienische Centralblatt.*

DR. ALEXANDER GRAHAM BELL has given $75,000 to the Volta Bureau of Washington, D. C., as a memorial to his father, Prof. Alexander Melville Bell. The bureau was established by Dr. Bell with the object of increasing the diffusion of knowledge relating to the deaf and dumb.

At a meeting of the council of the Michigan State Medical Society, held in Detroit on January 12, 1906, Dr. A. P. Biddle resigned, and Dr. B. R. Schenck was elected State secretary and editor of the journal.

A chair of social medicine has been founded in the University of Bonn. It has been accepted by Dr. Rumpf, professor of internal medicine and some time director of the medical section of the General Hospital at Hamburg.

An International Congress for the Aid of the Insane will be held at Milan this year from September 26 to 30. The president of the Organizing Congress is Prof. Augusto Tamburini, the general secretary Prof. G. Cesare Ferrari.

Dr. Walter R. Brinckerhoff, instructor in pathology at the Harvard Medical School, has been offered the position in Hawaii to take charge of the United States leper sanatorium which is to be established there. He graduated in the Harvard Medical School in 1902, and is only twenty-seven years old.

President Roosevelt has appointed a joint board composed of officers of the medical department of the army and navy to consider improvements in the matter of first-aid dressings and the advisability of the adoption of a uniform equipment in the medical department of the two principal branches of the military service.

At a recent meeting of the French Consultative Committee of Hygiene, Professor Gariel presented a report on a new scheme of drainage for Nice. The most novel feature in the plan is a proposal to use specially trained dogs to carry from one end of the sewer to the other a rope by which a brush can be drawn for the cleansing of the pipes.

There are twenty-four vacancies in the junior grade of the medical department of the army. The next examination of candidates for appointment as assistant surgeon in the army will take place April 1 or May 1. About that time also there will be commissioned as permanent officers in the corps the seventeen provisionally accepted candidates who passed the examination last year and who are under instruction in Washington.

Two petitions, signed by many of the best known physicians of New York and Boston, have been forwarded to Washington in behalf of the passage of the pending bill prohibiting the adul-

teration of foods and drugs, says the *Medical Record*. The petitions urge the senators and representatives of the respective States to use their influence in aiding the passage of the bill, and indicate its importance as a public health measure.

An Exposition of the History of Medicine in Art will take place at Berlin on the occasion of the opening of the Kaiserin Friedrich-Haus from the end of February to the middle of April. The exhibition will comprise original paintings, copper-plates, book-plates, statues, medals, old illustrated books and manuscripts relating to medicine and its profession, Roman and other ancient surgical instruments found in Germany, etc.

The American Institute of Scientific Research, which has recently been incorporated, will take for its province the study of abnormal psychology. It is to be under the direction of Prof. James H. Hyslop, and it is intended that the institute shall be something like the Salpêtrière under Charcot and Pierre Janet. It is proposed to study loss of the sense of personal identity, persistent hallucination, amnesia, psychic epilepsy, melancholia, and paranoia.

The School Management Committee of the Chicago Board of Education recently adopted without a dissenting vote a resolution calling for the appointment of a committee to draft a rule providing for the exclusion from the public schools of all victims of tuberculosis. The committee is also empowered to present a plan for the medical examination of all suspicious pupils with a view to determining whether or not they should be denied seats in the schoolroom.

According to the Washington (D. C.) *Post,* Commissioner of Internal Revenue Yerkes has stated that druggists may use alcoholic liquors in compounding physicians' prescriptions and in making tinctures for sale in good faith for medicinal use only, without subjecting themselves to special tax as liquor dealers, but he decides that a physician cannot prescribe whisky for a patient when not compounded with medicine, without involving himself in special tax liability, even though he prescribes it for use as medicine only.

According to *Il Policlinico* the total number of medical practitioners in Italy is 21,104, of whom 7035 labor in their vocation in large cities and 14,068 in the provinces. The places where doctors most do congregate are Naples and Rome. The

city of Naples has 1107, the province 290; there are 763 in the Eternal City itself, and 375 in the province of Rome. Milan has 935, of whom 635 practice in the city; Turin has 573, and the provinces 338. The province in which the number of practitioners is smallest is that of Sondrio, which has 65.

Regarding the Gibbs Memorial Prize the trustees of the New York Academy of Medicine publish the following correction of their previous announcement: (1) The prize amounts to two thousand dollars this time. (2) The prize-essays may be handed in October 1 (not January 1), 1907, or before that date. (3) The prize committee does not expect the "etiology, pathology, and treatment" of the diseases of the kidneys to be discussed with equal completeness, but will be satisfied with the thorough scientific consideration of part of the problem, provided an essay offered in competition contains new facts or discoveries or points of view of sufficient merit.

Among the members of the medical profession in foreign countries who have recently died are Dr. Emanuel Kusy; Ritter von Dubray, head of the Austrian Sanitary Department, and formerly president of the Austrian Public Health Society, aged 61; Dr. Thouvenet, professor in the Medical School of Limoges; Dr. Adolf Sachsalber, extraordinary professor of ophthalmology in the University of Graz; Dr. Domenico Chiara, some time professor of obstetric medicine and gynecology at Florence; Dr. P. Abramytscheff, lecturer on syphilis and dermatology in the Military Medical Academy of St. Petersburg; Dr. Karl Hodlmoser, head of the Internal Department of the Bosnia-Herzegovina Public Hospital at Sarafewo, aged 32; Dr. Delame, member of the French Chamber of Deputies.

Immigration officers state that there is an extensive business in doctoring immigrants so that, while really unfit, they can pass the physical examination at Ellis Island, says the *Philadelphia Press.* When past the barrier they are at liberty to relapse, and do so promptly. In many foreign cities there are hospitals for the treatment of people anxious to enter the United States. Especial attention is given to trachoma, an eye disease much dreaded here. One conscienceless Frenchman has made a fortune by this, largely through treating for the malady people who never had a touch of it. As these pass the examination, as a matter of course, they constitute a fine advertisement for the charlatan. Those really affected get temporary relief, the tell-

tale symptoms abating long enough to serve the purpose. The idea is new only in this particular application. Horse traders resort to similar methods. Some of them can so doctor a decrepit animal that for the nonce he is spirited, his coat shines, and he has a pleasing plumpness. Soon after a sale he collapses like a balloon. Horses are doped just before a race, and run with an artificial speed and strength, but the method fails to win approval. The immigrant that cannot pass muster until he has been doped should not be admitted. The possibility of his attempting it demonstrates the necessity for more rigid inspection. He makes essential a longer period of detention, and it may become imperative to analyze him for traces of adrenalin. The importation of healthy immigrants is desired, but infectious maladies must be kept under the ban, even to the discomfiture of the doped alien.

The Commission of the Isthmian Canal has made public its report. It is stated that after a decided increase in the number of cases of yellow fever during June the disease is now under control, and the arrangements for fumigating houses and cleaning up the town and camps have reached such a point as was never before thought possible. There have been two outbreaks of bubonic plague, consisting of only two cases—one occurring in June and the second in August. The drastic and instant measures taken to quarantine the infected spots were enough to stamp out the disease. The sanitation of Panama and Colon is still progressing, and the two towns are being wholly transformed. Both are supplied with a water system, and the work of paving is making favorable progress.

According to the London *Express,* the entire staff of medical men attached to the Exeter Dispensary have decided to strike. Insults, they declare, have been heaped on them, and "the profession of medicine degraded by the base calumnies of the committee." The trouble has arisen from a proposal by the committee to appoint a paid medical officer. In 1886 the medical staffs of the hospitals of Rome decided to strike on a certain day. When the day arrived each physician received from the Ministry of War a commission in the army, with orders to report for service to general officers who had simultaneously been appointed to take charge of the various hospitals. In these circumstances a strike would have been "mutiny." There was no mutiny among the new members of the Italian army's medical staff.

NEW PUBLICATIONS.

INTERNATIONAL CLINICS.

The new number of International Clinics contains if anything more than the usual number of good things. The present volume contains an exceedingly well illustrated article on psoriasis. The five articles on treatment are of interest and value. Dr. Benedict's article on the internal use of carbolic acid will be found very suggestive. All the interesting articles cannot be mentioned individually, but it may be stated with truth that the present volume more than sustains the high average of success that it has had in previous issues.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles by Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U. S. A. Vol. IV. Fifteenth series, 1906. J. B. Lippincott Co., Philadelphia and London.

DIFFERENTIAL DIAGNOSIS.

Dr. Augustus Caille has put the profession under great obligations for his very successful contribution to medical literature. He has produced a text-book which is thoroughly practical and clinical in spirit. He has endeavored to reconstruct on a somewhat new basis the relations of internal medicine, surgery, and the several specialties. The special chapters on the Technique of Diagnosis and Laboratory Aids are especially valuable. This is a text-book which will appeal to both student and practitioner, and other than a successful career cannot be predicted for it.

Differential Diagnosis and Treatment of Diseases. A Text-book for Practitioners and Advanced Students. By Augustus Caille, M.D. With two hundred and twenty-eight illustrations in the text. New York and London: D. Appleton & Co., 1906.

SCIENCE AND RELIGION.

This book tells us a lot of nonsense about phrenology, astrology, and other kindred subjects. Those interested in the horoscope of Adam may probably like to look into it, but why the book should be entitled "Science and Religion" is not apparent, as there is certainly no science in it, and if we know anything about the matter there is no religion either.

Science and Religion. By Benjamin F. Loomis, Graduate of the American Institute of Phrenology Class of 1886. New York, Melbourne, London: D. Appleton & Co., 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Operative Treatment of Suppurative Meningitis.

A. Kummell (*British Medical Journal*, Jan. 13, 1906) is of the opinion that the progress recently made by the operative treatment of suppurative and tuberculous peritonitis is such as to favor the supposition that active surgical intervention might improve the very serious prognosis in cases of diffused inflammation of the meninges of the brain and cord. Lumbar puncture, it is stated, has been followed by very good results in cases of cerebrospinal meningitis, and circumscribed suppurative meningitis set up by middle-ear disease and by compound fracture of the skull has been successfully treated by free removal of cranial bone and drainage. The prospects of operative treatment are generally regarded as much less favorable in diffused suppurative leptomeningitis, and according to Macewen such treatment is quite hopeless when the inflammatory mischief has extended from the base of the cranium to the cauda equina. The author reports a case in which intense and extensive meningitis following a fracture of the base, clearly indicated by the presence of pus in the fluid removed by lumbar puncture, was successfully treated by making two large openings into the posterior cranial fossa and excising the exposed portions of dura mater. Another case is referred to in which free exposure of the spinal canal in the lumbar region relieved to a considerable extent the more serious symptoms of fatal diffused cerebrospinal meningitis following removal of a tumor from the sacrum.

Tubercular Glands.

T. C. Oliver (*International Journal of Surgery*, January, 1906) says that there can be little doubt that tubercular infection of the cervical glands is rarely a primary condition. The original site of infection may be overlooked entirely, or it may be found in the throat, nose, ear, or scalp; in fact it may originate in any part from which the lymphatic drainage is into the cervical glands. One is inclined to attribute a very prominent rôle to the teeth and tonsils because of the fact that the submaxillary

glands are the ones which usually give the first indication of involvement. Sometimes the glands upon one side of the neck are alone affected, but again enlargement may occur upon both sides simultaneously, or nearly so.

Relief of Prostatic Ischuria.

E. W. Andrews (*Annals of Surgery*, December, 1905) says that the male pelvic outlet is a narrow bony ligamentous triangle often too small for the overgrown or senile prostate. The triangular ligament and urogenital diaphragm hold the bladder neck and prostate immovably between these bones. On cutting away these bands the constricted overgrown mass falls back into a wider space and ceases to be obstructed. Incidentally there is a relief to rectal reflexes and spasms. The retroprostatic pouch is abolished, and the bas-fond becomes a true funnel with its outlet at the lowest point. The technique recommended by the author is a simple one. It is especially efficient in respect to the deep hemostasis which it advocates.

Resection of the Cervical Sympathetic Ganglia.

At a recent meeting of the Paris Society of Surgery, M. Delbit (*Lancet*, Dec. 16, 1905) spoke on the treatment of facial neuralgia by resection of the sympathetic cervical ganglia. He recalled to mind instances in which this operation had succeeded for the condition in question, both from the practice of others and of himself. In his own experience all the cases operated upon had received immediate benefit where the neuralgia was of recent origin. Cases of long standing, however, were not benefited. The improvement following resection of the sympathetic could not be considered as a coincidence. For instance, in one case the operator could not find the sympathetic, and the neuralgia was in no way relieved.

Etiology, Symptomatology, and Treatment of Anal Fissure.

Herman A. Bray (*American Medicine*, Jan. 20, 1906) states the most characteristic symptoms of anal fissure are pain or irritation of the anus and paroxysmal contraction of the sphincters. While these symptoms may be considered as pathognomonic of

the disease, without a local examination comprising inspection and a digital exploration it is not possible to reach a correct conclusion. Treatment may be either palliative or operative. The former is sufficient in most cases. It consists of measures for preventing constipation, observation of local cleanliness, and local applications to the ulcer. The method of operation employed by Dr. Bray is divulsion with incision, trimming at the same time the indurated margin of the wound and curetting the base. The bowels should be kept confined for three days, and after this time daily movements are secured by laxatives. The ulcer usually heals in about two weeks.

Control of Nasal Hemorrhage.

Henry J. Mulford (*American Medicine,* Dec. 23, 1905) describes a simple method for controlling nasal hemorrhage, citing cases, and outlining the blood-supply of the nose and pharynx. His method consists of the subcutaneous injection of adrenal extract into the arterial supply at the nearest accessible point to the bleeding area. The injection may be made directly into the artery supplying the part, or it may be thrown into the tissue closely adjacent to the artery. This certainly is simple, but the result is marvelous. The ingoing arterial current sweeps the solution directly into the leaking area, all the vessels of the part are constringed, and almost at once the hemorrhage ceases.

MEDICINE.

Roentgen Diagnosis of Lung Disease.

G. E. Pfahler (*Journal of the American Medical Association,* Jan. 6, 1906) describes the appearances and method of examination in lung disease with the use of the Roentgen ray. For accurate work the exposures must be made while the patient holds his breath, usually from ten to fifteen seconds, and as a rule a careful physical examination should first be made. He does not use the fluoroscope because of its inaccuracy and the danger attending its employment. Generally two negatives should be made, one from the front and one from behind, to give proper value to lesions near the surface and to recognize any thickening of the pleura. The patient should be in the recumbent position except when pleural effusion is suspected, when he should be sitting. The tube should be eighteen or twenty inches

from the plate. The negative itself should be studied, and its proper interpretation is as important as its making. Old calcified tubercles can be recognized when only one-eighth of an inch in diameter; scars or fibrous tissue are less dense and require larger shadows, but can generally be recognized by their band-like appearance. Shadows of consolidations vary in density with the size of the lesion, but if one-half inch in diameter they can generally be recognized in an emaciated subject. Unless there is a general massive lesion, they seldom occur singly, and therefore give the lung a mottled appearance. Comparison of the suspected area with the other lung or different parts of the same lung will aid in their recognition.

Cavities are usually recognized by their greater transparency, surrounded by a deeper shadow of consolidation, and if large are easily seen. Difficulty may occur, however, if they are small or rest on a larger area of consolidation or thickened pleura. Under favorable circumstances a cavity one-half inch in diameter can be made out. Emphysematous areas are notably transparent. A dense shadow may be found on one side, but the other side is likely to be continuous with healthy lung tissue, thus differentiating it from a cavity. Pulmonary abscess and gangrene present similar appearances to cavity, but there is likely to be a larger area of consolidation in the former and a proportionately smaller one in the latter condition. Pneumonia gives a comparatively dense shadow of the affected area, and the ray may be of decided value in determining the extent and continuance of the lesions. Emphysema is characterized by transparency, but experience is needed to recognize the lesser grades or limited areas.

Lung collapse when small is hardly recognizable by the rays, but when large it gives a similar picture to that of consolidation. Thickening of the pleura, whether independent or associated with tuberculosis, gives a uniform shadow of only slight density, varying with the degree of thickening. Pleural effusion gives a uniform, not very dense shadow in the lower part of the pleural cavity. Pneumothorax is shown by a vertically elongated area of great transparency occupying the lower lateral portion of the chest. In hydropneumothorax there is, in addition, shadow of the pleural effusion. In two cases of hemothorax examined the shadow was denser than in any other form of pleural effusion, and Pfahler has also been able to recognize consolidation through an ordinary pleural effusion. He also found

the *x*-rays of service in the diagnosis of a subphrenic abscess. In conclusion he insists on the necessity of skill and experience on the part of the operator for the best results in this kind of work.

Feeding the Baby.

W. B. Hoag (*American Medicine*, Jan. 6, 1906) says the mother's breast when good gives ideal results. If well fed, the baby is good-natured, comfortable, has firm muscles, a stable nervous system, the bones are normally developed, and he shows a regular increase in weight. Marked deviation in diet, for any considerable period, from that the baby has a right to demand, is bound to produce errors in nutrition. Feeding the baby is not a mechanical process only, simply filling the stomach. Proper growth and development demand definite nutrition. The ability of babies to assimilate food varies; each case presents a personal equation which must be considered. In every questionable case examine the mother's milk. For bottle feeding, good dairy milk and not "one cow's milk" should form the basis of the food. Set "formulas" are an abomination. Begin with the weakest dilution of cow's milk and increase as the baby assimilates, rather than upset his digestion with a so-called "rational formula" as a starter. Cereal gruels are used successfully in health and disease as diluents of cow's milk. Cane-sugar should be used in preference to milk-sugar. In making working formulas the amount of nutrition the baby receives must be known definitely. Alkalies should not be added regularly to the food; rather secure good milk and have it well prepared and kept. Sterilization or pasteurization should be dependent on quality of milk and time of year. Difficult feeding cases are usually the result of bad management. Quantity at feeding and interval of feeding should be definitely advised. Stomach washing should be employed to promote assimilation. Condensed milk is valuable as a temporary food.

Medical Treatment of Abdominal Pain Not of Gastric Origin.

James E. Talley (*American Medicine*, Jan. 13, 1906) discusses the medical treatment in these cases. He states that nowhere else is an absolutely accurate differential diagnosis more

difficult than in the upper quadrants of the abdomen. He takes up in turn the discussion of hernias, functional neuroses, intoxications, abdominal pain not due to disease below the diaphragm, hepatic conditions, renal pain (nephrolithiasis, floating kidney, intermittent hydronephrosis, pyelitis), intestinal conditions, pancreas, spleen, peritonitis, and pelvic conditions. Ectopic pregnancy must also be borne in mind as a possible cause of sudden abdominal pain.

THERAPEUTICS.

The Rôle of Saline Solution in the Treatment of Pneumonia.

J. Madison Taylor (*Medical Record*, Jan. 13, 1906) presents a résumé of the facts relating to the position of the normal salines of the blood plasma and its contained autoprotective potentialities, the recognition and use of which are capable of furnishing a beneficent agency in overcoming infectious processes. Modern physiological pathology has made good the assumption that the immunizing antibodies appear in the blood whenever an infectious disease terminates in recovery, and that he claims is our greatest weapon in overcoming pathogenic elements. A few observers have called attention to the value of saline solution designed to supply the enormous loss in those essential constituents of the plasma which occurs during febrile states. They have recommended the use of the measure only late in the disease, and in desperate cases. Dr. Taylor calls attention to the extreme importance of following the recommendations of Sajous to employ these measures from the outset, as soon as the disease is recognized, in order to insure the full efficiency of the blood's antibodies—*i.e.*, the body's autoprotective powers. Saline solution used early preserves the blood's normal fluidity, renders normal osmosis possible, and gives free sway to the immunizing process. He urges that to delay in the use of the salines is just as dangerous as to delay administering antitoxin in the case of diphtheria; and, moreover, that the blood in infections suffers such rapid depletion of saline elements, the effect of which is to impair the efficiency and finally arrest the protective functions of the organism, that this constitutes one of the most active causes of death. The practical recommendation is to begin from the outset in pneumonia and other infectious fevers the internal use of saline solutions, especially those con-

taining sodium chloride and the other saline constituents of the blood. The use of these salines by hypodermoclysis or enteroclysis has been recently shown by a number of observers, acting upon Sajous's advice, to be of great efficiency when used early. The use of the saline drink has been shown by Todd and the writer to be of equal efficiency, and not at all inconvenient or disagreeable.

The Influence of Adrenalin Chloride upon Toxic Doses of Cocaine.

A. Berry (*American Journal of the Medical Sciences,* November, 1905) examined the conclusions arrived at by former experimenters that previous injections of adrenalin lessen the toxic action of cocaine while enhancing the duration, extent, and intensity of its anesthetic effect. Other observers have shown that cocaine poisoning did not come on so rapidly in cases in which adrenalin was used, due to the fact that adrenalin chloride has an inhibitory action on the general absorption of fluids. In order to test the value of the addition of adrenalin chloride to cocaine as a local anesthetic, its effect upon toxic doses of cocaine was studied in twenty-seven experiments upon guinea-pigs. The injections were made into the peritoneal cavity, the dosage being in proportion to the animal's weight, and when the drug was used in combination the adrenalin was injected first, followed in ten minutes by the injection of cocaine. The doses of cocaine were too large to show the real value of the combination as a local anesthetic, and it was manifest that adrenalin will not protect the organism against toxic doses of cocaine. In using adrenalin-cocaine care should be taken not to inject a toxic dose of the cocaine, since the adrenalin not only fails to protect the body against toxic doses, but rather seems to enhance their action.

Effect of Tea on the Gastric Secretions.

Sasiki (*Berliner klin. Woch.,* 49, 1905) experimented with tea on the gastric secretions, using a dog with an esophageal fistula. He found that the secretions are inhibited, and that tea reduces the proteolytic properties of pepsin. Tea is probably an appetizer due to its aroma, and on this account may assist nutrition. The best results cannot be obtained by giving tea in a test breakfast.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Mysophobia.

Punton in the *Journal of Nervous and Mental Disease* (October, 1905) reports a case of one of those phobias which are so often considered to be entirely upon the neurasthenic side of the line, and the relation of which to marked insanity is many times unappreciated. The patient was Miss A., aged twenty-five, a stenographer, and single. Her personal history was uneventful up to fourteen, when she conceived a great aversion to a companion, and after being with her would wash her hands and at times her gloves many times. The habit increased, and the idea of contamination by the one companion extended to a fear of pollution by any and all with whom she came in contact, and to permit this she was continually washing her hands. Associated with the fear there was engendered a dislike for all fancied sources of contamination. She even left the town where she was employed, so sure was she that associates had contaminated her. The dress sleeve of a visitor touching a dish at the table was sufficient to drive her from the table, whence she went to her room and stripped and took a sponge bath. Letters received from those whom she thought might contaminate her were washed before being read.

Under tonic and hygienic treatment at a sanitarium she was much improved in general health, and promised if permitted to go home for a visit to refrain from morbid habits, but soon insisted on scrubbing the entire premises. She again improved, and again lapsed, becoming so troublesome that she was finally committed as insane. Though she returned home after a time she did not abandon her peculiar ideas, and continued in much the same state.

Dana has advanced the idea that most of the neurasthenias are really prodromal stages. Prevention in such a case is extremely difficult. If treatment is to have any chance, early recognition of the significance of symptoms is imperative.

The non-insane psychoses are subject to the same therapeutic laws and principles which apply to the more pronounced forms of incipient insanity.

A New Hysterical Stigma.

In the October number of the *Journal of Nervous and Mental Disease* W. W. Graves offers a comment upon a new and apparently constant stigma in hysteria; this he has confirmed in a number of cases. Of the subjective symptoms pain and paresthesia, and of the objective anesthesia and analgesia, are the most constant. In a recent series of forty cases sensation was found normal in only five per cent. This particular sensory disturbance which he here relates he discovered while examining a patient who had had frequent hysterical fits and other hysterical manifestations. This was consistent in anesthesia associated with hyperalgesia sharply confined to the areola-nipple area. He was so impressed with his findings that he has since made it a rule in private and clinic work to note especially the state of sensation of the areola-nipple areas in every individual coming under his observation. These observations have shown that the disturbance was found in no normal case; that it was not present in any organic disease, neurosis, or psychosis unless hysteria was a complication; and that in every case of hysteria, thirty in all, six males and twenty-four females, this phenomenon was invariably present. Some of his colleagues have confirmed his observations, and his own experience compelled him to consider the areola-nipple anesthesia associated with hyperalgesia as a pathognomonic and apparently constant stigma in hysteria, and that it may be of assistance in helping to differentiate between the so-called functional disorders, and between the hysterical and the organic.

Some of the Rarer Forms of Hysteria.

In the *Journal of the American Medical Association* of November 11, 1905, C. C. Hersman gives clinical reports of three cases of hysteria, one showing marked hyperpyrexia on exhibition of the tantrums of temper to which the patient, a girl of four, was subject; another exhibiting motor disturbances, attacks in which pronation and supination with abduction and adduction of the elbow rapidly alternated (at the rate of 120 per minute). Such attacks were not confined to the right arm, but also occurred in the left arm, and similar disturbances in the leg and face. A serious attack occurring in the doctor's office was promptly aborted by suggestion.

In the third case the motor attack consisted in a rhythmic

jerking of the diaphragm at the rate of 180 per minute. Great force was expended, but there was no apparent exhaustion, though there was excessive perspiration.

Concluding, he raises the following questions:

Is there an irritating product formed within the cortical neurons?

Is there a paralyzing product within the cortical neurons?

Is there an irritating body or product in the plasma which bathes the nerve cell?

Is there an increase in the formation of cytotoxins?

Is there a decrease in the elimination of the metabolic waste product?

GYNECOLOGY AND OBSTETRICS.

Actual Cautery in Leucorrhea.

G. L. Hunner (*Journal of the American Medical Association*, Jan. 20, 1906) describes his method of treating leucorrhea by making deep radial incisions in the cervical tissues by means of the cautery blade. With the patient in the dorsal or lithotomy position, a broad-bladed Sims speculum is introduced into the vagina, the anterior lip of the cervix is seized with a tenaculum, and the cervix is pulled down as near the vulva as possible. The nurse works the cautery bulb with one hand while she holds the speculum with the other, and the operator keeps the tenaculum in one hand and manages the cautery with the other. The strokes should be made one at a time; the cautery is removed from the vagina after each stroke, as the patient feels the radiated heat on the vaginal walls. She must be warned not to move, and she will feel no actual pain, unless there already exists a painful cervical scar, in which case Hunner uses preliminary cocaine anesthesia by means of a tampon soaked with 20-per-cent cocaine solution applied for ten minutes. The number and depth of the strokes vary with conditions present, but he usually gives six, ranging from 2 to 5 millimeters in depth and extending across the whole hypertrophied mucosa. The treatments are given once in three weeks, and usually number from one to six. A sterile strip of gauze is left in the vagina against possible hemorrhage, and the patient is instructed to withdraw it the following evening. If the bleeding is profuse she should go to bed. There is often a little hemorrhage after three or four days, and

in one or two of these cases this was enough to alarm the patient. A daily douche is advised during the interval between treatments. So far as Hunner knows, there have been no bad after-effects as regards parturition. He emphasizes the importance of a correct diagnosis before treating any case of leucorrhea. If there is any suspicion of cancer he advises an examination by a competent pathologist. In fresh gonorrheal cases he does not use the cautery or anything that can excite or extend a cervical infection. In chronic gonorrhea he does not persist too long with the cautery or cervical treatments as there may be infection higher up, but cases not extending above the cervix may be considered curable. The quickest and best results are obtained in a cervical hypertrophy and eversion due to multiple childbirth. One advantage of the method is that it can be used in office practice and without anesthesia.

Modern Obstetric Methods.

J. A. McKenna (*Journal of the American Medical Association,* Dec. 16, 1905) criticizes meddlesome midwifery, and particularly some recent utterances. Besides the use of thorough asepsis, he emphasizes the following as points deduced from his personal experience: To deliver all cases in the dorsal position, to support the head and perineum by a modification of Merkitt-schiantz's method, which reduces the danger of lacerations to a minimum, and especially to have the fundus of the uterus grasped before the presenting part is born, and firmly held until the child is delivered and the cord tied. This, he considers, has been the cause of his never having any postpartum hemorrhages, and says that in the great majority of cases it has facilitated the extraction of the placenta. He gives no douches, and he has only used the forceps twice since leaving the maternity hospital shortly after graduation. He has never had to put more than two stitches in any perineal tear. Another important point emphasized is the position of the patient in bed. In most puerperal cases there is a tendency to burrow down and to have the hips and vagina at the lowest point, so that septic fluids in the bed or stagnant in the vagina can the more easily infect the womb. To obviate this he keeps the hips well raised from the bed during the whole course of the labor, thus preventing any contamination from return flow of liquids.

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ORIGINAL CONTRIBUTIONS.

CHRONIC PROSTATITIS AND ITS TREATMENT.*

BY WM. C. MARTIN, M.D., DETROIT, MICH.

One of the most trying conditions that the practitioner is called upon to treat is a chronic inflammation of the prostate gland. The causes of inflammation of the prostate are gonorrhea, injury to the prostatic urethra by instruments, irritant applications, and the passage of stones. External trauma and exposure to cold are doubtful causes. Some have held that the bicycle is responsible for inflammations of the prostate, but Thompson, White, and Martin and Guyon deny this. Sexual excesses, constipation, and diseases of the rectum, by causing congestion of the prostate, predispose to inflammation. Prostatitis also occurs in infectious diseases, typhoid fever, smallpox, pyemia, and glanders. Among bacteriologic agents, the pyogenic cocci, the gonococcus, and the bacillus coli communis have been found. Chronic prostatitis may follow the acute, or may come on insidiously. The principal cause is gonorrhea. There is a discharge of a more or less viscid secretion (prostatorrhea) containing desquamated epithelium, leucocytes, and amylaceous bodies, Boettcher's crystals, and peculiar casts resembling renal tube casts. The prostate may be reduced in size or enlarged. Microscopically, the lumen of the tubules is filled with desquamated epithelium, leucocytes, and amylaceous bodies. About the glands are leucocytes and newly formed spindle cells. Cicatricial bands pass in all directions; their contraction may occlude the ejaculatory ducts; sometimes, however, it tends to keep them patulous, this constituting one cause of spermatorrhea.

The consensus of opinion at the present time is that gonorrhea is, in most instances, the cause of chronic prostatitis. Zeller as early as 1700 and Littre and Warren in 1711 were of the opinion

*Read before the Wayne County Medical Society, Feb. 26, 1906.

that all gonorrheas represented disease of this gland. Swedianer in 1728 and Girtanner in 1803 gave it as the cause of chronic clap, and the latter claimed that in almost every case, acute or chronic, it was more or less involved, and that from that time on it constantly increased in volume and hardness until the opening from the bladder was finally obstructed.

These ideas were later reiterated from time to time by various writers, until more recent studies have proven that prostatitis does occur as a complication of both acute and chronic gonorrheal inflammation of the urethra, the result of a direct extension of the infection from its posterior part. The frequency of posterior urethritis varies from one-sixth of all cases (Leprovost) to 93 per cent (Dind). Finger found it more frequent in dispensary work (82 per cent) than in private practice (63 per cent); and according to Van der Poel nearly 40 per cent in 191 cases, dispensary and private. Finger believes that every case of posterior urethritis is accompanied by prostatitis. Frank recently found that of 210 cases of posterior urethritis all suffered with prostatitis. Greene gives the results of the study of 214 unassorted cases of urethritis. The posterior urethra was involved in 66 per cent, and examination of the prostate showed enlargement in 47 per cent. He also says: "What becomes eventually of these swellings of the prostate? It would be interesting to know whether the prostate entirely returns to its normal condition or not. I am personally inclined to believe that in many cases these swellings do not entirely disappear. Further data, also, as to the average normal size of the prostate than are at present at hand would help us in revealing some of the many mysteries connected with that organ. Certainly the accumulated evidence of observers during the past ten years of urethritis in the male (with the exception of those gentlemen who publish statistics, which tend to demonstrate that it (gonorrhea) is an ephemeral disease which can be cured by a few irrigations) tends to show that in the female it is a serious affection, prone to involve tissues of the body much deeper than those in which it originated."

The position held by some authors that the prostatic urethra may be the site of a gonorrhea without infection of the prostate is not tenable in the light of recent clinical and pathologic developments. In regard to the symptoms of this condition we find that in the great majority of cases the signs and symptoms of a posterior urethritis are more or less marked, though often but slightly so, or so gradual in their onset that they may at first escape observation, with but a slight turbidity of the second

urine; and accentuated, though not pressing, desire for micturition.

When well marked, when the second urine is decidedly cloudy and thready, with the desire for micturition frequent and urgent, with more or less strangury and possibly some blood with the last urine, symptoms referable to the prostate, a sensation of weight, pain, and tension in the perineum, with sensitiveness and pain upon digital pressure per rectum, are also apt to be present, though the prostate may or may not be enlarged, depending upon the degree of previous trouble. Other cases of a more powerful infection may commence with a chill and fever, with perhaps mechanical obstruction; a small stream, twisted or in drops; or even perhaps complete retention. This is associated with intense pain in the deep perineal and anal regions, exaggerated by the slightest movement, or by defecation or micturition. Rectal examination, which is painful even without touching the gland, shows the prostate much increased in size, elastic, and tender. The seminal vesicles are also usually involved, and may be likewise tender and swollen. This acute condition can last for a week or longer, depending much upon the treatment, and then resolve and form the initial stage of a chronic prostatitis, or go on to suppuration, prostatic or periprostatic. Oftentimes the diagnosis in the lighter forms of chronic prostatitis is entirely overlooked. If prostatitis be suspected massage of the gland is necessary, followed by microscopical examination of the massaged fluid. By this means alone we are able to determine the existence of pus cells with their contained gonococci. Rectal palpation even in the lighter forms of the disease reveals more or less change in the structure of the gland. The mild cases show areas of softening, while if the disease is parenchymatous there is usually uniform enlargement, though sometimes only unilateral.

In order to be positive that the gonococci found in massaged fluid are from the acini of the prostate gland and not the posterior urethra, it is better as a matter of routine to thoroughly irrigate the deep urethra before massage is attempted. The older the case under examination the more difficult it is to find the gonococci, and repeated search is sometimes necessary before we are successful. It has been demonstrated beyond doubt that the gonococci may lie dormant in the prostate for years. A case was reported by Frank some years ago in which five years after marriage a wife without previous trouble became infected, no urethral discharge existing in the husband; but after careful

massage of the prostate gonococci were found in the massaged fluid. After prostatic massage the urethra should again be irrigated in order to prevent further infection or reinfection of the urethra in chronic cases in which there no longer exists a discharge from the urethra.

The treatment of this disease is perhaps the hardest proposition that the genito-urinary surgeon comes in contact with. Naturally all our efforts must be concentrated on the one object, that of ridding the prostate gland of its contained germs, and if our cases are to be handled intelligently the microscope must be used constantly, for by it alone are we enabled to tell what progress we are making. Regulation of the habits of the individual, as regards diet, drinking, and sexual matters, is important. Sexual intercourse must be positively forbidden. In neurasthenia tonics are indicated. Cold steel sounds every third day frequently produce a marked beneficial effect. In the writer's experience nothing has proven so valuable in the way of deep injections as a strong solution of argyrol. Solutions varying in strength from 10 to 50 per cent may be used with a Keyes-Ultzmann syringe. The solution should be allowed to remain in the deep urethra for at least ten minutes. Cocaine, 2 per cent, is often very valuable as a deep injection in relieving pain and vesical symptoms. Hot rectal irrigations are also of great value in the treatment of chronic prostatitis. Our chief reliance, however, must be placed upon massage of the gland. Instrumental massage is not to be recommended, as it is not only unnecessary but dangerous, and the work can be much better and more intelligently done with the finger. Massaging must be done with gentleness, otherwise there is danger of setting up an epididymitis. Gentleness combined with thoroughness will in a few minutes empty the gland of its contents, after which the bladder should be irrigated with a mild solution of permanganate of potassium. Every third day is often enough to massage in chronic cases. The prognosis of old inflammations of the prostate must be very guarded, for now and then cases present themselves that resist treatment no matter how conscientiously it may be carried out.

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MALINGERING.

BY M. B. SULLIVAN, M.D., DOVER, N. H.

It is an almost invariable rule at the present time that persons who meet with accidental injuries, whether real or fancied, appeal to the courts for redress and compensation, and at any term of court a good percentage of cases for jury trial are damage suits against corporations or individuals for alleged injuries, and great as is this demand for compensation, as seen by the court records, it is still a small item compared with those cases which are settled privately.

It is a well known fact that the average jury, in reaching a decision in these cases, has a leaning toward the party who has been injured, and against a rich corporation or individual, to such an extent that the judge has been obliged at times to throw out the verdict as contrary to both law and evidence, and it is this knowledge that is at the bottom of occasional settlements out of court by the defendant.

In many places certain members of the legal profession are on the lookout for the participants in an accident case, even to the employment of runners to hunt up possible claimants. In a case reported in New York City a man was injured late in the afternoon, and before eleven o'clock the following morning had been visited by eight lawyers. The legal fee, a division of the spoils, or a contingent fee, was not overlooked in this preliminary investigation.

With the well known prejudice in the minds of the jury against corporations, the lawyer associates with himself some so-called medical expert, and the case is ready. The corporation then settles, if possible, on a not too extravagant basis, or decides to fight.

As there is no legal criterion by which the value of medical opinion can be estimated, the testimony of a charlatan carries the same weight in the minds of the jury as that of a physician familiar with the subject of pathological conditions of a possible injury to the physical or to the nervous system.

In this light it is not surprising that feigning of disease or malingering occurs, and frequently corporations are defrauded.

I call to mind a damage suit brought against the Boston and Maine Railroad, by a man in a neighboring town, for alleged injury to the spinal cord. The damage claim was for $10,000.

I was asked to go and examine him by the corporation. I found him complaining of entire loss of motion of right leg, but I found the tendon reflexes the same on each side, found no ankylosis of the joints, as would be expected by non-use for months, and although he claimed entire loss of muscular strength or motion on that side, I found on suddenly raising the foot and letting go of it the patient still kept it raised, until he thought of himself, then it dropped like a block of wood.

In talking with the attorney I found that the company acknowledged negligence on their part, and I advised a settlement, which was made, and the man soon returned to his work in the shoe factory.

Feigning or malingering does not occur in physical injuries, as in fractures, dislocations, etc., but with the nervous system it is different; no part of the nervous system can be felt, and the optic nerve is the only one that can be seen.

It is commonly functional diseases of the nervous system and neurasthenia that are exaggerated and feigned, especially if there is a speculative aspect to the case, and in these cases, as well as in other forms of nervous troubles, an important element in the case is to know of the condition of the nervous system prior to the alleged injury, as it is often a difficult matter to decide whether the various symptoms claimed to be present, and which are purely subjective, may be due, wholly or in part, to voluntary or involuntary exaggeration. When voluntarily exaggerated, they might well be called "litigation symptoms," and cannot be proven by objective examination; yet it is well known that a patient suffering from neurasthenia, or functional disturbances of the nervous system, describes his symptoms as more severe than really exist, even if he has no claim for damages. He cannot keep his mind from himself and his sufferings. Could the mind be distracted to more cheerful thoughts much good would result, and prospects of complete restoration be much improved. A person claiming damages for injuries cannot overlook the slightest of his symptoms, and frequently confounds old troubles, that passed almost unnoticed when in health and busy with work, as caused by his injuries.

Engraft these conditions on a sensitive neurasthenic, with the frequent rehearsals of his case to lawyers, experts, and family intimates, with the broodings and introspection that necessarily accompany it, and he comes to believe himself damaged beyond any possible repair, and truly believes it, and any medical treatment or advice is fruitless until a decision is reached.

To decide between exaggeration or malingering of this sort, which is really sincere, and the variety developed by dishonest greed, is very near impossible, as the symptoms are all subjective, and a man may claim he has a severe headache or backache which may be true or false, and even though he has an established reputation as a liar, he may be telling the truth at this time.

A few years ago I examined the plaintiff in a suit for injury against the Dover Street Railway. The examination showed objective symptoms of spinal congestion, but as I knew the party well and his utter lack of conception of the first principles of truth or honesty, I felt inclined to doubt my examination. He made a private settlement with the company for a small sum without the knowledge or consent of his attorney, and he is a cripple now, and will probably always have a limited use of one of his limbs. The fact must be borne in mind that permanent disability often follows traumatic neurasthenia as well as traumatic hysteria, so that it is often extremely difficult to say whether a given case is one of real degenerative changes in the cord or not. As a rule, a verdict ending litigation is followed by improvement, whether such verdict is favorable or unfavorable—not always even in neurasthenic cases, but always in malingerers. A man who brought suit against the Boston and Maine Railroad used a cane for eighteen months, but forgot it in the attorney's office when he walked out briskly with a check.

To say no evidences of disease can be demonstrated is not positive proof that no disease exists, unless a general summary of his daily acts and his general appearance can be carefully investigated. Some authorities even go so far as to say that all nervous symptoms after an accident are feigned or true organic lesions.

A successful malingerer must have his wits about him constantly, and be ready at a moment's notice for any ordeal of examination, as various examiners make various changes in the examination, and notes are liable to show variations in the detailed account of symptoms.

He must be ready at all times to be insensitive to a needle prick, alternate heat and cold, and other inquisitorial methods, but these have largely been superseded by faradism, as the most accomplished malingerer cannot simulate the degenerative nerve reactions of electricity.

I was called to examine a man in a neighboring town who had brought suit against a corporation for permanent injury to

the cord, produced by a fall on a piece of machinery sticking up from the floor. His fall was caused by his shoe catching in a faulty piece of flooring that the company had neglected to repair. His chief symptom was paralysis of motion and sensation of right lower extremity. As paralysis of one extremity is almost impossible without other marked symptoms, and especially in an injury to the cord which has paralyzed both motion and sensation, the lack of extreme loss of tone of the muscular tissues and absence of bed-sores made me suspicious, and although he bore without a twitch a needle thrust into the quick of the great toe-nail, yet I found the patellar reflex normal, and got a response from a sudden faradic current, and in spite of the fact that my examination was made concurrently with that of a professor from the Maine Medical College, who was sure the man was going from bad to worse rapidly, I reported him as a malingerer to the company, but advised a settlement, if possible, as they admitted liability. A settlement was effected, and I learned that within two weeks he had thrown away his crutches, had discarded his wheel-chair, and was on the streets whooping and howling an Indian war dance, the beginning of drunken orgies, that continued to his death from alcoholism and exposure about six months after.

We are all liable to error in the diagnosis of these symptoms of nervous conditions, but more prone to error if we espouse the cause of plaintiff or defendant too strongly, thus insidiously leading us astray.

If called upon to make an examination, it should be made as judiciously as though it was a private individual coming to consult us, and if after careful analysis our opinion is not one that could be successfully brought out in court to the plaintiff's or defendant's advantage, we should drop from the case rather than publicly make a sworn statement that can be torn to pieces by another, and calling down upon the medical profession the ridicule of attorneys for defense and even of the judge, as occurred in our Supreme Court in Strafford county, when the late Judge Doe instructed the jury to eliminate all the medical evidence that had been offered, because the testimony of the medical witnesses for and against the plaintiff had been so diametrically opposed, and could only end in confusion in the minds of the jurors.

There is no doubt that opinions can differ to a broad extent regarding the diagnosis between the various forms of traumatic lesions of the nervous system.

The line is closely drawn between organic and functional lesions, between traumatic neurasthenia and hysteria, as a result of trauma, and between malingering and real nervous disturbances and disease, so that there will always be ground for honest differences of opinion.

The legal profession considers it a good joke to hear these radical differences of opinion between medical men, yet hardly a day passes that legal opinions are not properly reversed in the highest courts in the land. I recall a case that I was requested to examine in this city a few years ago and made up my mind that the woman was a neurasthenic malingerer, and on stating my opinion to her counsel he did not ask my testimony before the jury. She obtained a verdict, however, and has been a cripple ever since, with probable degeneration of the posterior columns of the spinal cord. So while it must be difficult for the medical witnesses for plaintiff and defendant to actually agree on every point, perhaps, yet it seems to me that a joint examination, followed by a fair discussion of the case, would leave us in much better standing before the court and jury, on being summoned to the witness chair, and leave out some of the unfavorable comments on medical witnesses.

THE Rockefeller Institute for Medical Research purposes to award for the years 1906-7 a limited number of scholarships and fellowships for work to be carried on in the laboratories of the institute in New York City, under the following conditions: The scholarships and fellowships will be granted to assist investigations in experimental pathology, bacteriology, medical zoölogy, physiology, pharmacology, and physiological and pathological chemistry. They are open to men and women who are properly qualified to undertake research work in any of the above mentioned subjects, and are granted for one year. The value of these scholarships and fellowships ranges from six hundred to one thousand dollars. It is expected that holders of the scholarships and fellowships will devote their entire time to research. Applications accompanied by proper credentials should be in the hands of the secretary of the Rockefeller Institute, Dr. L. Emmet Holt, 14 West Fifty-fifth Street, New York City, not later than April 1, 1906. The announcement of the appointments will be made about May 15. The term of service begins preferably on October 1, but by special arrangement may be begun at another time.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

OLD AGE AND THE LARGE INTESTINE.

The desire to live long in the land is responsible for strange beliefs regarding impediments to longevity. In his interesting work on "The Nature of Man" Metchnikoff says: "Some very large parts of our alimentary canal must be regarded as useless inheritance, bequeathed to us by our animal ancestors. It is no longer rash to say that not only are the rudimentary appendage and the cecum, but the whole of the large intestine, superfluous, and that their removal would be attended with happy results. So far as digestion goes, the latter portion of the alimentary tract is of little importance. Even from the point of view of absorption of the products of digestion its importance is strictly secondary. Stagnation is a familiar cause of disease, and is the probable cause of the frequency of cancer of the stomach. Of 10,537 cases of cancer of all parts of the digestive tract recorded in the Prussian hospitals, 4288, or more than 40 per cent, affected the stomach. The latter organ is one that the human body would do well to be rid of. It is not so useless as the large intestine, since it is the chief seat of digestion of the albuminous substances, but the small intestine could take its place."

What harmfulness results from the possession of a stomach and large intestine is a conception which is of course based upon Metchnikoff's peculiar views on the etiology of arteriosclerosis. That the toxins of the body are the causes of degenerative changes in the blood-vessels, and these toxins are specifically elaborated in the large intestine, form the nucleus of his doctrine. Even that potent cause of arteriosclerosis, alcohol, Metchnikoff seems to think may be secondary to conditions arising within the body. "While the large intestine," he says, "acting as an asylum

of harmful microbes, is a source of intoxication from within, the aberrant instinct of man leads him to poison himself from without with alcohol and ether, opium and morphia. The wide-spread results of alcoholism show plainly the prevalent existence in man of a want of harmony between the instinct of choosing food and the instinct of preservation."

It certainly would seem that arteriosclerosis is not solely of intestinal origin. Lead-poisoning, the use of high tension remedies, excessive nitrogenous intake, and the direct action of alcohol would all seem to be invested with the attribute of primary factors in the causation of arterial degeneration. If it be, as Metchnikoff says, that the stomach and large intestine are useless organs and fill no needed place in the economy of the organism, why not eliminate them by surgical procedure? The surgical treatment of old age might thus be brought within the range of practical expedient. The old man with a short assimilating tube consisting of such length of small intestine as Providence had endowed him with and the zeal of surgery had permitted to exist, might perhaps linger through the centuries and outrival Methuselah in the length of his days. He would not be an enviable type of man, his bland smile would no longer seem to be in secret communion with his marked abdominal protuberance of former days, but he would possess a graceful, insinuating figure, and he could penetrate the narrow places that obstructed his progress to perfection with unusual agility.

It is very beautiful, all this transcendent physiology, but at the same time one cannot help feeling that there is greater security to be found by reposing in the well established dictates of common sense.

EDITORIAL NOTES.

Hygiene of the Barber Shop.

The chance of infection from barbers' dirty implements is often brought to the notice of the profession, and of late years a movement has been started to enforce cleanliness in barber shops. A recent number of the *Hygienische Rundschau* describes a shop in Munich that has been fitted up in accordance with the principles of modern hygiene. Apart from the wooden handle the brushes consist of an aluminum frame in which the bristles are inserted, and which may be removed from the handle to be sterilized in steam. The combs are also made of aluminum, and

may be sterilized by steam or hot water. The razors and scissors are disinfected by brushing with spirit of soap. Pulverized soap is used, and is put up in covered boxes so that the quantity required for each customer may be taken separately. The lather brushes are sterilized after being used, and the soap is washed from the skin by sterilized pieces of linen. Powder is applied by tufts of cotton-wool held in wooden forceps. All the linen is sterilized after each time of using, and the piece which is fastened around the customer's neck is prevented from touching the skin by a paper collar, which is put between them and is destroyed after being used. As the propagation of disease by barber's implements is so well known it is highly desirable that such shops as the one just described should become general, and that the time-honored but dirty methods of barbers be a thing of the past. We are not accurately informed as to the cost of barbering a person by this method.

The Treatment of Sea-sickness.

The latest method to be advocated for the prevention of sea-sickness has been suggested by a medical officer of the Hamburg-American Company. It consists of placing the susceptible individual in a chair that is vibrated electrically. The chair is connected with the electric supply of the ship. The patient sits in the chair with his feet placed on a foot-board and his arms resting on suitable supports, and a rheostat is provided by means of which he is able to regulate the electric current. A German exchange recently published an article on the method, in which the author stated that patients improved obviously under the treatment, but only so long as they remained in the chairs. Just how this method works is hard to explain, but if it will prevent sea-sickness it will be hailed by thousands of sufferers as a great boon to humanity.

Grover Cleveland on Mysticism in Medicine.

Practitioners of medicine are so accustomed to being the butt of jokes and jibes from the laity that rarely or ever do they pay any attention to them. Recently in an address before the Medical Society of the State of New York no less a personage than the Honorable Grover Cleveland had his little fling at the profession. He said in the course of his remarks that it would be well for physicians to be more candid with their patients, to speak

in plain English, avoiding the mysticism that in the popular mind is the main object of the use of technical expressions, that convey either no meaning at all or else a confusing idea to the untutored understanding. Mr. Cleveland evidently views the question of mysticism in medicine only from his own point of view. Every physician knows how hard it is to judge how much of the truth it is permissible to tell a person who is seriously ill. The best physician is the one who is open and frank with his patients if they possess an order of intelligence high enough to stand being told just what ails them and what the probable outcome of the illness will be.

Austrian Doctors on a Strike.

The struggle for existence in the medical profession in this country seems hard enough, but we sometimes learn that our colleagues in other lands often have a harder time than we in this. At present the country doctors in Austria have become so discontented with the miserly payment allowed them by the state that they are seriously contemplating a strike. They refuse any longer to vaccinate the poor for twopence a head when veterinary surgeons get four times that sum for inoculating cattle against disease. They also refuse to go on examining tramps and vagrants at a rate which pays a qualified doctor less for overhauling a wandering vagabond than the barber gets for cutting the hair of the same individual. They have decided that unless the government promptly increases the whole scale of payment for public medical attendance they will cease work, except in cases of extreme peril. We can only hope that they will gain their demands and be given a living wage for their services.

The Pure Food Bill Passed.

At last the Senate has allowed the passage of a pure food bill. After nearly twenty years of effort on the part of those interested in protecting the public against adulterated foods, we are to have federal regulation of our food products. But while the bill has been passed it remains to be seen whether or not the powerful interests, such as the liquor, patent medicine, etc., will not find some means of evading its provisions. It is to be sincerely hoped that the time has now arrived when the purchaser of food products will at least know what he is buying.

ITEMS AND NOTES.

During the year 1905 there were 955 fatal accidents in the collieries of Great Britain and Ireland.

Memphis is to have a new medical college, to be known as the College of Physicians and Surgeons.

Kaiser Wilhelm has recently appointed von Bergmann a member of the upper house of parliament (Herrenhaus) for life.

It is planned to furnish a post exchange and amusement hall for the use of patients of the general hospital at the Presidio of San Francisco.

Governer Magoon of the Panama canal zone says there has not been a case of yellow fever in Panama in seventy-four days. The health of the canal zone is excellent.

The Ohio Senate has passed a bill abolishing capital punishment for persons convicted of murder in the first degree, except when the conviction shall be for a second offense.

The Yerkes hospital foundation of six million dollars was established by the late Charles Tyson Yerkes. A great hospital will be built in the Bronx Borough out of this benefaction.

Dr. Roger S. Morris, instructor of internal medicine in the medical department of the University of Michigan, has resigned to accept an appointment in the Johns Hopkins Hospital, Baltimore.

An association for promoting the interests of the blind has recently been organized in New York City. The first work of the new association will be a careful registration of the blind of the city.

Under the auspices of the Kentucky Club of Denver, Colo., a tuberculosis sanatorium is to be founded near Denver for the reception of tuberculous natives of Kentucky, who will receive treatment at low cost.

A new medical college founded by a union of four Protestant missions and established with the imperial approval was to be opened at Peking on February 1, 1906. It will be known as the Lockhart Medical College.

The thirty-fifth congress of the German Surgical Association will be held at Berlin, April 4 to 7, the date having been advanced a few days so as not to conflict with the International Medical Congress at Lisbon April 19.

That bovine tuberculosis and human consumption are the same disease was asserted at the annual meeting of the Missouri Live Stock Breeders by two veterinarians and a member of the medical department of Missouri University.

With 29,200 physicians, Germany has one for every 1700 inhabitants. In the city of Berlin 46 per cent of all the physicians have an income of less than $700, and 5 per cent of the whole number do not have sufficient income to return it for taxation.

In the states of the German Empire there is a tariff regulating the charges to be made by the physician giving a high and a low mark. To this has been added lately the following remark: "Physician's advice by telephone is to be charged as a visit to the office."

It is said that in France, when smallpox appears anywhere in the country districts, a calf with vaccine pustules is taken bodily to the place, and all the neighboring inhabitants are vaccinated, frequently in the street, and directly from the animal. The calf is sent from a central institution in Paris, and there are special railroad accommodations for its transport.

The Health Officer of Brazil expresses dissatisfaction with the results of his inspection of quarantine methods and facilities, and of the way in which the health regulations of the republic are observed, in the northern ports. He reports that the general health of northern ports is good, but that there is a great deal of smallpox and yellow fever in Manoa, and that the latter malady is prevalent in Belem, the port and capital of Para.

Dr. Boissarie, of Lourdes, France, says an exchange, sent recently, as usual, his annual report to the Pope of the miraculous cures effected at the famous grotto of Lourdes in his charge. He received, in reply, a letter from Dr. Lapponi, the medical attendant of the Pope, stating that in future the latter wished to have arrangements made to establish the identity of the persons thus cured, with depositions of physicians and witnesses who have seen the patients before their cure, placing the Lourdes experiences on a more scientific basis than hitherto.

There exists in Constantinople under the patronage of the Spanish Minister, the Marquise Camposagrado, and many well known members of the upper classes of the city, a society for the purpose of the protection of infants, foundlings, and small children generally. This society possesses a hospital where little ones of every race and denomination receive the best care and treatment that can be provided for them in the city.

An oxygen hospital was recently opened in London. On this occasion the wards were inspected by the visitor, who saw consumptive patients in glass-enclosed cubicles, into which purified and oxygenated air is driven by an electric fan. A gratifying feature of the inspection, states the *Hospital Gazette,* was the presence of many patients who had been cured at the hospital, and came to give a practical proof of the merits of its treatment of ulcers, wounds, lupus, and consumption.

We learn from *Nature* that a committee of leading representatives of science in many parts of the world has been formed with the object of placing a monument to the memory of the late Prof. Ernst Abbe at Jena on a site between the Volkshaus erected by him and the optical works to the development of which he devoted his life. As Zeiss's instruments are used in almost all parts of the world it may be said that Abbe has a monument in every laboratory, but there may be grateful physiologists and pathologists who would like to send their subscriptions to Dr. Gustav Fischer, Jena.

Interest is increasing in the approaching session of the International Congress, which is to be held at Lisbon, April 19 to 26. John H. Musser, of Philadelphia, is chairman of the National Committee, and Ramon Guiteras, of New York City, is the secretary, to whom all applications for membership in the congress and communications regarding papers should be addressed. The sailing date of the American party is April 7 by the North German Lloyd steamship *Konig Albert.* The arrangements are in the hands of Charles Wood Fassett, of St. Joseph, Mo., to whom applications for reservations should be made.

The Massachusetts State Board of Insanity in its seventh annual report says that the whole number of the insane, the feeble-minded, the epileptic, and inebriates under care October 1, 1905, was 11,990 (5966 men and 6024 women), an increase for the year of 416 (211 men and 205 women). The insane on the

same date numbered 10,153 (4832 men and 5321 women), being one insane person to every 296 persons of the general population. The board asks that accommodations be provided for 200 more. The extreme overcrowding reported last year has been relieved, and will continue so if the State will furnish this additional room each year.

THE medical inspectors of the schools at Berlin have, says an exchange, recently published a detailed report of their work during 1904-5. Each inspector has 127 classes—that is, eight or nine schools—to supervise, more than four times as many as in any other German city. The report shows the inestimable benefit of medical inspection from many standpoints. It was found that in one school 31.9 per cent of the girls and 34.4 per cent of the boys were habitually drinking beer every day, while 1.8 per cent of the girls and 4 per cent of the boys took alcoholic drinks. The development of nervous affections during school life is also confirmed by the report.

PRELIMINARY examinations for the appointment of assistant surgeons in the army will be held on May 1 and July 31, 1906, at points to be hereafter designated. Permission to appear for examination can be obtained upon application to the Surgeon-General, U. S. Army, Washington, D. C., from whom full information concerning the examination can be procured. In order to perfect all necessary arrangements for the examinations of May 1, applications must be complete and in possession of the Surgeon-General on or before April 1. Early attention is therefore enjoined upon all intended applicants. There are at present twenty-five vacancies in the medical corps of the army.

A COLORED woman alleged to be one hundred and thirty-five years of age died at the Home for Aged and Infirm Negroes in Philadelphia on January 6, says the *Medical Record*. According to the statements of her relatives she was born on November 14, 1770, in a settlement known as Frogtown, near Valley Forge, Penn. She often told of scenes in and about the camp of Washington's soldiers at Valley Forge in the winter of 1777-8. As is usual in reported cases of extreme old age she is said to have used tobacco all her life. From England comes the story that Henry Johnson, of Grantham, the oldest acrobat in the United Kingdom, has just entered on his hundredth year and is still lithe and active. He has lived during the reigns of five British sovereigns.

The Surgeon-General of the army has made a recommendation that cadets at the Military Academy be given a rigid physical examination at the end of every year, so that the weeding out of physically disqualified cadets may be done throughout the course instead of only at the end of the four years' course. The Surgeon-General has also recommended that the minimum height for cadets who enter the Military Academy at seventeen years of age be 5 feet 4 inches, with the condition that when they reach the age of eighteen they must have the minimum height of 5 feet 5 inches. No cadet who has reached the age of eighteen on entrance at the academy will be admitted who is under 5 feet 5 inches in height if the recommendation of Surgeon-General O'Reilly is approved.

The Board of Health of the city of Mexico has received, says *American Medicine,* the necessary authorization and will institute at once a campaign against unsanitary conditions. Householders will be required to keep their premises clean, and landlords must increase the supply of water in tenement houses. Bath houses will be built at all police stations in the city. Persistent beggars will be banished from the city. The clothing of the very poor will be burned, and they will be provided with new raiment. The congested population in the tenement district will be dispersed, and inspectors of health boards will be vested with extraordinary powers. The recrudescence of fever among the lower classes due to bad housing and improper food and personal filthiness has caused a decided stand to be taken by the authorities.

F. Schaudinn, of Berlin, has been working lately in the Hamburg Institute for Tropical and Ship Diseases, under commission from the Imperial Council of Health. The Hamburg authorities have now decided, says the *Journal of the American Medical Association,* to invite him to become permanently connected with the institution, the official title of which is the "Institut für Schiffs- und Tropenkrankheiten." He is to be assistant in zoölogy with a salary of 9000 marks (about $2250) and a pension later. The sum of $14,250 has been appropriated to enlarge the institute. Schaudinn's fame as an authority on protozoa was so well established that when he announced the discovery of the spirochaeta pallida the world stopped at once to listen, while the words of a lesser authority might not have attracted attention for some time.

NEW PUBLICATIONS.

NASAL SINUS SURGERY WITH OPERATIONS ON NOSE AND THROAT.

This book contains a description of all the ordinary operations upon the nose and throat. The operative procedures are described in a clear and concise manner, and the excellent cuts with which the work is embellished increase in a very appreciable manner its general usefulness. The book will be a valuable one not only for specialists but also for the general practitioner.

Nasal Sinus Surgery with Operations on Nose and Throat. By Benjamin Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. Illustrated with 68 full-page half-tone and colored plates, including nearly 100 figures. Royal octavo, 256 pages. Bound in extra cloth. Price $2.50 net. F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia, Pa.

THE PHYSICAL EXAMINATION OF INFANTS AND YOUNG CHILDREN.

This little book is an excellent compendium of all that is necessary in making an examination of infants and very young children. It is admirably illustrated, and it is replete with useful suggestions of all kinds. It may be very safely commended as an excellent guide for practitioners in dealing with the maladies of child life.

The Physical Examination of Infants and Young Children. By Theron Wendell Kilmer, M.D., Adjunct Attending Pediatrist to the Sydenham Hospital; Instructor in Pediatrics in the New York Polyclinic Medical School and Hospital, New York; Attending Physician to the Summer Home of St. Giles, Garden City, New York. Illustrated with 59 half-tone engravings; 12 mo, 86 pages. Bound in extra cloth. Price 75 cents net. F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia, Pa.

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY.

The second edition of Dr. Rockwood's Laboratory Manual appears in a revised and enlarged form. It will furnish the student with all that is necessary for a full and practical course in laboratory technique.

A Laboratory Manual of Physiological Chemistry. By Elbert W. Rockwood, M.D., Ph.D., Professor of Chemistry and Toxicology and Head of the Department of Chemistry in the University of Iowa, etc. Second Edition, Revised and Enlarged. With one colored plate and three plates of microscopic preparations. Large 12 mo, 229 pages; extra cloth. Price $1.00 net. F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia, Pa.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Education in Sexual Subjects.

F. C. Valentine (*New York Medical Journal,* Feb. 10, 1906) says that sexual physiology and hygiene need not be formally taught girls, save in the exceptional instances in which the genesic impulse is prematurely developed.

Sexual physiology and hygiene should be taught every boy when mental and sexual puberty make him capable of beneficially utilizing the knowledge.

The nature and scope of instruction on sexual subjects should be regulated according to each pupil's ability properly to appreciate the warnings inseparable therefrom.

The age at which a person may safely be instructed in sexual subjects is that age at which in each individual case such instruction becomes necessary for the purpose of moral and physical prophylaxis.

The individuality of the parent, physician, or teacher should be the guide to the choice of one or the other as the exponent of the facts.

Educational institutions may be utilized for instruction in sexual subjects, but such instruction must be given to small groups of pupils selected because of their mental parity as nearly as may be. Text-books on elementary hygiene should not contain chapters on sexual physiology. Those charged with imparting instruction on sexual subjects should be provided with separately printed chapters on the physiology and hygiene of these matters. These separately printed chapters could then be given with the greatest discretion to such pupils only whose mental development would preclude their misusing the information derived therefrom.

All instruction to the laity on sexual subjects should be directed essentially to serve as a groundwork for the following ideas:

(*a*) Many learned men hold that ante-nuptial coitus is not necessary for the health of the individual.

(*b*) Continence reduces the sexual desire.

(*c*) Gratification of the sexual impulse before marriage degrades the moral tone and exposes to serious infection.

(*d*) Venereal diseases are not disgraceful infections, but the result of unfortunate lack of self-control.

(*e*) The greatest danger at the inception of venereal diseases is in their being maltreated by quacks.

(*f*) If a person is so unfortunate as to contract a venereal disease, self-preservation should cause him to immediately seek the advice of his family physician.

Chronic Discharge in Organic and Functional Disorders of the Deep Urethra.

T. M. Thompson (*Medical Record,* Dec. 30, 1905) devotes the first part of his long paper to a general consideration of the factors involved in these disorders of the posterior urethra, and points out some of the reasons that make their treatment difficult. He divides the processes of this region that are characterized by persistent or periodic discharge from the meatus, or appearing in the urine, into the organic and the functional affections. In the former group are classed chronic posterior urethritis, chronic prostatitis, chronic seminal vesiculitis, and chronic cystitis—processes that follow a history of simple or specific inflammation of the urethra due to the gonococcus pus organisms, traumatic and toxic sources. No matter how closely the discharge may resemble that in the functional disorders, it is to be remembered that pus is the distinguishing element. The functional disorders include urethrorrhea, prostatorrhea, spermatorrhea, and phosphaturia, all of which result from what may be termed abnormal physiological activity due to sexual desire. The functional types are non-inflammatory, and pus is not present in the discharge, whether it appears at the meatus or in the voided urine.

Each of the four organic conditions is then discussed in connection with the corresponding functional disorder that simulates it, and in this way the differential diagnosis is elucidated. The treatment of each group is then described. In dealing with the functional disorders the author lays more stress on the personality of the physician and general hygienic rules than on purely medicinal agents. Massage and the cold steel sound are valuable measures in the later stages of the cure. The following plan of treatment of the organic lesions is first outlined and then amplified in detail: (1) Gradual dilatation with steel sounds; (2)

copious irrigation with dilute solutions (pure astringent, pure antiseptic, or antiseptic and slightly astringent); (3) topical applications with concentrated solutions (same as in 2); (4) internal urinary antisepsis; (5) meatotomy when the meatus is constricted and to permit proper dilatation; (6) massage of prostate and seminal vesicles; (7) administration of oleoresins for acute exacerbations and relapses; (8) hydrotherapy, electricity, medicinal tonics, reconstructives, etc., *p. r. n.* Drawings of the microscopical structures to be found in the urethral secretions and illustrative case histories are appended.

A Modified Method of Appendectomy.

D. Kolliker (*British Medical Journal,* Jan. 20, 1906) in a contribution on resection of the appendix describes a plan of external incision which, he holds, causes very little injury, and is as good a preventive of ventral hernia as the method of superimposed rows of suture. The skin incision commences at McBurney's point and is carried inward and downward toward the middle of the symphysis over a distance of about 8 centimeters. The exposed portion of the aponeurosis of the external oblique and from one-third to one-half of the sheath of the rectus having been divided, the latter muscle is set free by blunt dissection in the direction of the wound and drawn over toward the median line. After division of the tendinous portions of the internal oblique and transversalis muscles and the transversalis fascia, a small opening not more than 4 centimeters in length is made in the peritoneum. The advantages claimed for this incision are these: The peritoneal opening lies behind the replaced rectus, and very little muscular tissue is divided. In closing the external wound only two rows of sutures are required—one for the peritoneum, and the second for all the other layers of the abdominal wall taken together. When exposure and separation of the appendix are hindered by adhesions the incision can be extended at either end.

The author directs attention to two points which might be found useful in difficult cases of appendectomy. In a case of adherent appendix the anterior longitudinal band, it is stated, is drawn over in the direction of the displaced and fixed process, so that this band when convex along its inner margin indicates a retrocecal position of the appendix, and when convex along its outer margin an inner or pelvic position. If an adherent appendix be at first exposed near its attachment to the cecum and

divided between two ligatures, and then dissected out from its proximal to its distal end, the operation will be rendered much easier than that in which separation of the process is the preliminary step.

Surgical Suggestions.

The February number of the *American Journal of Surgery* contains the following suggestions:

In pulling on the round ligaments in the Alexander operation, use the fingers rather than the instruments; a surer hold is given, one can gauge the proper force to employ more readily, and there is less likelihood of the ligaments tearing.

Most cases of sudden, unexpected hemorrhage from the urethra are due to malignant disease, but it is well to remember that there are cases of genito-urinary tuberculosis in which such a hemorrhage is the first symptom.

Accumulated experience shows that castration alone will not cure the great majority of cases of tuberculosis testis. In many, if not most, cases the vas deferens, seminal vesicle, or prostate is involved, and it will be necessary to remove one or more of these structures in order to cure.

It is not sufficiently established that the character of the crystals found in the urine indicates the presence or identity of lithiasis in the urinary tract. When cystin crystals are constantly found in the sediment, however, if symptoms of lithiasis are present, the stone is probably made up of cystin.

The examination for tubercle bacilli in the urine by the ordinary method of staining is not decisive by any means, even if the bladder has been catheterized and differential stains for smegma bacilli have been employed. Numerous examinations with the aid of these procedures must be made, and even then the diagnosis is only a presumptive one. The only sure test is by injecting a large quantity of the sediment into a guinea-pig.

Congenital Stenoses of the Urethra.

F. E. Gardner (*Medical Record*, Dec. 23, 1905) says that this malformation is much commoner than one would be led to suppose from the very scanty literature of the subject. Foisy in a recent thesis collected 104 cases, and now the reported instances of the condition have reached a total of 110. The author outlines the development of the urethral canal, and says that the

chief points to be borne in mind are the following: (1) The urethra is formed by three embryological portions: (*a*) the posterior urethra developed from the urogenital sinus and separated from the next portion by the cloacal membrane; (*b*) the spongy portion developed from the urethral groove and closed during the first stages of its development by the cloacal membrane, at its posterior extremity, and the epithelial wall of the glans at its anterior; (*c*) the balanic portion developed independently. (2) The spongy and the balanic portions—*i.e.*, the whole anterior urethra—are not derived, as is the posterior urethra, from a hollow embryonic organ, but on the contrary develop in a solid continuous mass of epithelial cells. It is therefore not surprising that congenital strictures are more common in the anterior than in the posterior urethra.

The symptoms are then described at length, and it is stated that nocturnal incontinence and diurnal frequency of micturition are characteristic features. Incontinence in children, if not accounted for by some evident external malformation, is frequently due to a congenital stricture and not to "essential incontinence" or to "congenital irritability," as is usually alleged. In adults every stricture is not necessarily the result of trauma or gonorrhea, and gonorrheal strictures develop much more quickly on the basis of an already existing congenital stenosis. The treatment is gradual dilatation; only rarely is it necessary to resort to internal or external urethrotomy.

The Theory of Narcosis.

At the first lecture of the Harvey Society course (*Journal of the American Medical Association*, Jan. 21, 1906) Prof. Hans Meyer, of Vienna, advanced a theory of narcosis, which he stated as follows: "The narcotizing substance enters into a loose physico-chemical combination with the vitally important lipoids of the cell, perhaps with the lecithin, and in so doing changes their normal relationship to the other cell constituents, through which an inhibition of the entire cell chemism occurs. It also becomes evident that the narcosis immediately disappears as soon as the loose, reversible tension combination dependent on the solution breaks up. It follows, further, that substances chemically indifferent, as the volatile saturated hydrocarbons, can act as narcotics." It is the distribution relationship, the so-called distribution coefficient of the narcotics between fatty and watery

solutions, that is the determining factor of narcotic action, and with the increase in this distribution coefficient there is an almost parallel increase in the narcotic strength—that is, decrease in the molecular concentration necessary for narcosis, as he shows by a table deduced from experiments with a number of well known narcotics. The apparent exceptions to the general rule are readily explainable by the naturally inexact methods of estimation of narcotic power. As all living cells contain lecithin, a lipoid body, this theory explains why all cells capable of stimulation are depressed by these narcotic substances. Narcotic drugs are complex substances, and therefore that some of them produce other effects, sometimes even masking their narcotic action, is not remarkable. It is not attempted, moveover, to explain every type of narcosis by this theory. It is probable that other disturbances in chemical equilibrium may occur to inhibit the function of the cell, and that substances such as morphine are narcotic otherwise than through the "alcohol lipoids," and the same may be true of the very remarkable narcosis from magnesium salts lately discovered by Meltzer.

Cerebellar Tumor.

Burton Chance (*American Medicine*, Jan. 13, 1906) reports a case in a man of twenty-six. The symptoms were those of intercranial tumor of the hind-brain rather than of the more forward portions, and appeared to be those produced by irritation rather than by the destruction of the basilar centers. Although an intense papillitis which was present was conclusive of the presence of a tumor, the indefiniteness of the other symptoms hindered the assumption that the tumor occupied the cerebellar region. The chief focal symptoms were those of deviation of the optic axes, with disturbances of direct and binocular vision and facial palsy; yet after energetic treatment the paresis of the left external rectus muscle, as well as the diplopia and the facial palsy, greatly disappeared, and when the man was placed under strict hospital regimen the general symptoms all but ceased, for there were no headaches, emesis, or muscular spasms until the last course. The gait, station, and the knee-jerks were not interfered with until very late in the progress of the malady. There was hyperexcitation of the sexual function almost until the end. The general bodily nutrition was maintained up to the last weeks of the man's life. A report of an examination of the brain made by Dr. Spieler is appended.

The Influence of Light in the Production of Cancer.

T. N. Hyde (*American Journal of the Medical Sciences,* January, 1906) says that the skin of the human body is, in some instances, hypersensitive to the action of the actinic rays of the spectrum. This hypersensitiveness may result in hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis or cancerosis of the skin, or all of them at times in a determined order of succession. In the form of a childhood cancerosis, which is known as xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life, though in rare instances. The above mentioned conditions are more common in adults, especially after the middle period of life. Physiological pigmentation of the skin in the colored races furnishes relative immunity to cancerosis of that tissue. Colored races also suffer less frequently than whites from cancer of other portions of the body. This relative immunity may be due to protection from actinic rays of light furnished by the pigment of the integument.

Hypertrophy of the Prostate and Diabetes.

C. Posner (*Berliner klin. Wochenschrift,* No. 46, 1905) calls attention to the possibility of overlooking prostatic troubles when treating a diabetic patient. Again, the prostate may produce such severe symptoms as to cause the attending physician to overlook a diabetes. The author believes that a hypertrophied prostate tends to predispose to a diabetes, as with it is usually found associated arteriosclerosis. The treatment of prostatic hypertrophy should be such as to ward off diabetes. The dangers of catheterization and operation are increased by the presence of glycosuria.

Umbilical Surgery on the New-born Child.

M. Meyer (*British Medical Journal,* Jan. 13, 1906) operated recently on a new-born child with a large hernia without using an anesthetic, and the infant recovered, although the operation lasted for one and a quarter hours. The sac was very thick and consisted of amnion and peritoneum; they were separated, and then a coil of ileum was discovered bearing a cystic Meckel's diverticulum. The neck of the sac was dilated, the cyst separated from the sac, to which it adhered, and resected, but suture of the

ileum proved very difficult. The intestines were then reduced, the peritoneum sutured, the sac excised, and the integuments closed. Out of thirty-two radical operations for hernia of the cord at birth six deaths occurred, whilst four out of seven cases of that form of hernia treated expectantly proved fatal.

MEDICINE.

Some Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis.

John H. Pryor (*Medical Record,* Nov. 25, 1905) states that as the result of observation and experience gained while acting as the first medical superintendent of the New York State Hospital for the Treatment of Incipient Tuberculosis, his conviction that pulmonary tuberculosis is rarely recognized at an early and proper time for successful treatment has been decidedly strengthened. This conclusion is corroborated by the fact that the hospital, which was created under a law providing that only incipient cases could be admitted, has never contained more than one-third of the number of cases that could be accommodated. The following definition of incipiency or favorability was agreed upon by a committee of the National Association for the Study and Prevention of Tuberculosis: "Slight initial lesion in the form of infiltration limited to the apex or small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during twenty-four hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent."

Inquiries submitted to a number of sanatoria in the United States to learn the percentage of incipient cases received, as thus defined, revealed the fact that the average percentage of all patients under treatment which could be designated as early and favorable varies from two to thirty. An analysis of all cases treated at the New York State Hospital shows that sixty per cent were received. In attempting to account for this state of affairs the author says that one reason is that the patient does not seek medical advice early enough. This is especially the case among the poor, who also often receive incompetent counsel when they do go to a physician or dispensary. Another reason

is the faulty education in medical schools and the recent tendency to give prominence to laboratory methods at the expense of the skill of the clinician. The classical symptoms almost invariably presented in combination are loss of appetite, chlorosis or anemia, loss of weight, cough, with or without expectoration, hemorrhage, and fever. It is extremely rare that all of these are associated at an early time; they are apt to be presented at a later stage. This is particularly true of patients who have had rest, nourishing diet, and open-air treatment. Many times under these conditions few or no symptoms are apparent, and yet the disease may be progressive. The author also discusses at length the physical examination of the chest, and points out the necessity for painstaking examination of the patient with the clothing removed to the waist.

Etiology and Prevention of Smallpox.

W. T. Councilman (*American Medicine*, Oct. 21, 1905) gives the results of an investigation of smallpox undertaken by members of the Pathological Department of the Harvard Medical School. It is believed that the organism which constitutes the virus of vaccinia and smallpox is the same; that in vaccinia it undergoes a definite cycle of development, resulting in a structure, the gemmules arising from simple growth and segmentation; that in smallpox a further and more complicated cycle of development, in which probably sexual forms occur, is added to the vaccine cycle. It is only in man and in the monkey that the conditions are favorable to the development of the cycle which constitutes smallpox. The intranuclear parasites are just as characteristic for smallpox as are the cytoplasmic forms for vaccinia. They are found in both variola inoculata and in variola vera. The spores which arise from the multiplication of the intranuclear bodies constitute the contagion of smallpox, which is capable of air transmission. This introduced into a susceptible animal develops the typical disease, smallpox, both cycles of the organism taking place in the lesions. In the non-susceptible animal, such as the calf or rabbit, only the single and probably asexual cycle is developed, constituting vaccinia. The work, which is nearing its temporary conclusion, has left the fundamental questions pertaining to the disease unanswered. These relate to: (1) The parasite and its complete life cycle. (2) The relationship between vaccinia, variola inoculata, and variola vera. (3) The mode of infection in variola vera. (4) The

mode of production of the exanthem. (4) The immunity, its mode of production, and the relationship between the natural and acquired immunity.

Landry's Paralysis

R. McGregor (*Journal of the American Medical Association*, Dec. 9, 1905) reports an interesting case of Landry's paralysis and discusses its etiology and pathology. While he considers it to be due to a toxemia, specially involving the anterior spinal horns, he thinks it probable that in very virulent intoxication the peripheral nerves may also be implicated in a secondary way, and a multiple neuritic condition coexist. These are the cases that, perhaps, give most trouble in their diagnosis. The very high mortality of this disease, however, is in striking contrast with those disorders, multiple neuritis and anterior poliomyelitis, with which it is most liable to be confounded. In the case reported, the attack seemed to follow vaccination. It was preceded by chilly sensations, fever, sweatings, and vertigo, and the rapidly ascending paralysis within a week from its first appearance had involved all four extremities, the muscles of speech and deglutition, and the ocular muscles. There was also cardiac irregularity and dyspnea, but there was no pain or nerve tenderness, and no fever after the stage of onset. The patient slept well and took a fair amount of nourishment. The bulbar symptoms began to improve after two months, but recovery was not approximately complete until after two years, and the patient has not yet attained his former weight (180 pounds). There is still a slight foot-drop, most marked on the right, and the knee-jerks have not returned. In the treatment the best results seemed to follow the use of a simple solution of the glycerophosphate of iron with small doses of strychnin.

Some Observations on Albumoses in Urine

W. P. Ebner (*American Medicine*, Feb. 3, 1906) after mentioning the discoveries of Bence Jones, and discussing briefly the subsequent contributions to our knowledge of albumoses in urine, takes up their clinical significance in general and mentions the following as the diseases in which albumosuria most frequently occurs: Multiple myeloma of bones, tuberculosis, especially pulmonary, croupous pneumonia in the stage of resolution, septicemia, pyemia, abscess, carcinoma, sarcoma,

when undergoing rapid retrograde change; the leukemias; and Hodgkin's disease after treatment with Roentgen rays. The various tests for albumoses are considered at some length, and he recommends the following as the most practical: A reagent consisting of a 50-per-cent solution of sulphosalicylic acid in distilled water. On contact this reagent precipitates all proteids found in the urine, while albumins, globulins, etc., are not precipitated, so that when any or all of the albumin group are present with albumoses in a filtered specimen the warmed urine will separate them, and the albumoses can be determined by cooling the filtrate. Care must be taken to avoid prolonged boiling, for if mucins be present they may be broken down, one of the products being an albumose. A very small quantity of albumoses may be detected by dividing the urine after adding the reagent and warming one part while cooling the other, and comparing the tubes before a dark surface. He cites thirty-four cases of albuminuria in various diseases, with a comparison between the variations in the amount of albumoses in the urine and the leucocyte count as an index to the patient's condition, and concludes that especially in destructive processes in the lungs the albumoses in the urine are a more delicate guide than is the leucocyte count.

Digestive Disorders and Abdominal Pain.

John F. Erdman (*Medical Record*, Jan. 20, 1906) discusses a region which he says is comprised in an area irregularly pyramidal in shape, the base not exceeding three inches square in the normal human subject, with the apex made by the common biliary duct, head of the pancreas, the duodenal end of the stomach, and the first portion of the duodenum; while in the base during health we have the fundus of the gall-bladder, a portion of the lesser curvature of the stomach, etc. The difficulty of clinically establishing an absolute diagnosis of disease invading one of the structures mentioned as forming the apex of the pyramid often renders it desirable to make use of all possible aids in the chemistry of digestion and of the excreta. Exploratory operations, however, frequently reveal conditions at variance with what the chemical examination indicates, so that for the present at least the symptomatology must often be relied upon in arriving at a decision. The author discusses the symptoms likely to be encountered under such conditions, particularly the various forms of digestive disorders and the nature of the

pain present. Three illustrative cases treated successfully by operation are described: in one there were gastroduodenal and biliary adhesions with gastroptosis; another was an instance of acute hemorrhagic pancreatitis; and the third patient had gallstones in the common duct.

Inflammation of Tissues and its Relation to Cancer.

E. H. Nichols (*Maryland Medical Journal,* February, 1906) says that certain types of epithelium (epidermis), both adult and fetal, can be experimentally removed from their normal position and implanted into another part of the same animal, and under those circumstances can maintain their "potentiality of growth," retain their own peculiar character, and produce nodules analogous to dermoid cysts or more complicated teratomata.

In no case has any epithelium of a highly differentiated function been seen to maintain its power of growth or to proliferate. The "potentiality of growth" is greater in the case of fetal than it is in adult tissue.

In no case has any infiltration of surrounding tissue by the transplanted epithelium been seen, nor any tendency to epithelial metastasis.

Certain fetal connective tissues (cartilage) can be transplanted in the same way as epithelial tissues and retain their "potentiality of growth."

Transplanted fetal tissues do not reproduce the stage of development at which they are transplanted, but tend to reproduce the ultimate stage of their normal development.

The Physical Aspect of American Football.

E. H. Nichols and H. B. Smith (*Boston Medical and Surgical Journal,* Jan. 4, 1906) present the following conclusions: (1) The number, severity, and permanence of the injuries which are received in playing football are very much greater than is generally credited or believed. (2) The greater number of the injuries come in the "pile" and not in the open plays, although serious injuries are received in the open. (3) The number of injuries is inherent in the game itself, and is not due especially to close competition, as is shown by the fact that the proportion of injuries received in games and in practice is about the same. (4) A large percentage of the injuries are unavoidable. (5) The percentage of injuries is incomparably greater in football than

in any other of the major sports. (6) The game does not develop the best type of men physically, because too great prominence is given to weight without corresponding nervous energy. (7) Constant medical supervision of the game where large numbers of men are engaged is a necessity and not a luxury, although it is a question if a game requiring the constant attendance of two trained surgeons is played under desirable conditions. (8) The percentage of injury is much too great for any mere sport. (9) Leaving out all other objections to the game, ethical and practical, the conditions under which the game is played should be so modified as to diminish to a very great degree the number of injuries.

Tuberculosis of the Thoracic Duct and Acute Miliary Tuberculosis.

Warfield Longcope (*American Medicine,* Jan. 6, 1906) reports a series of cases which show that the thoracic duct is of great importance as a channel for the spread of tubercle bacilli through the body from the various groups of lymph nodes. Undoubtedly tuberculosis of the veins and arteries is also to be reckoned as a factor in the rapid dissemination of tubercle bacilli through the body, but is subsidiary in importance to tuberculosis of the thoracic duct and its tributaries.

From a study of the cases Dr. Longcope concludes: Tuberculosis of the thoracic duct is of great frequency in cases of acute generalized tuberculosis. The lesions in the duct from which tubercle bacilli are swept in great numbers through the lymph to the general circulation form the starting-point for the generalized acute process. In certain cases of acute generalized tuberculosis, tubercle bacilli may be found in the lymph from the duct, though the duct itself is not the seat of tuberculosis. In a small percentage of cases of subacute generalized tuberculosis the duct may also be affected.

Fever in Chronic Endocarditis.

T. S. Thacher (*American Journal of the Medical Sciences,* January, 1906) says that a large proportion of hospital cases of chronic endocarditis even when uncomplicated have fever which may be high and long continued without apparent cause. Neither the presence of fever nor its degree in such cases follows strictly the variety or degree of endocardial lesion. Febrile cases with

hemorrhagic eruptions are prone to be fatal, while the febrile uncomplicated cases are almost as fatal as those with marked complications, and more fatal than the afebrile cases. Improvement sometimes occurs even in cases with prolonged and high fever. The line of demarcation which distinguishes malignant endocarditis from other forms is not distinct. The rheumatic febrile cases of chronic endocarditis are as favorable as the afebrile, or even more favorable.

Protection from Tuberculosis by Lymph Glands.

J. Bartel (*Wiener klin. Woch.*, No. 41, 1905) calls attention to the results of his experiments, which he says are positive proof that the lymph glands are the organs which take an active part in resisting the invasion of the tubercle bacillus. The normal lymphocytes of the sheep are able to destroy the virulence of the tubercle bacillus, so that guinea-pigs inoculated with bacilli so treated will not become infected. The writer says that the bacteria after contact with the lymphocytes of the sheep lose the power of reproduction, also their power of chemotaxis and reproduction, and will prove an effective immunizing material for producing an active immunity.

Ants as Carriers of Typhoid.

G. Meyer (*Münchener med. Woch.*, 47) relates his experiments with mice infected with mouse typhoid, and to whose cages ants had access, as also had they to the cages of some uninfected mice. Shortly after the ants were noticed the uninfected mice all became sick with typhoid. Plates of media over which the ants were allowed to run showed a pure growth of mouse typhoid along the ant tracks. The writer himself became infected, the typhoid bacilli being found in his stools and urine, and his serum giving an agglutination in dilution of 1:250.

Relation of Blood to Blood-pressure.

Holobut (*Wiener klin. Wochenschrift*, 49, 1905) in his experiments comes to the following conclusions: An increased blood-pressure (as was formerly believed) is not always accompanied by an increase in the number of red blood cells, nor is a decrease in pressure due to a decrease in them. It was shown

that a decrease in pressure has no connection with a degeneration of the erythrocytes. The important fact brought out was that the apparent increase in the cells was due to their decrease in size, by which a greater number were contained in the cubic millimeter than otherwise. The solids and water of the blood and plasma showed but little variation.

An Epidemic of Typhoid in Children.

Tischler (*Münchener med. Woch.*, 42) reports a case of an epidemic amongst the schoolchildren of Deggendorf. About 200 of the poorer children receive a lunch of soup at a kitchen built for that purpose. Two of these children were taken sick December 10 and stayed at home. Ten days later fifty other children were taken sick, the condition proving to be typhoid. The children lived in different portions of the town. The total number of children affected was sixty-one, and only among those who had eaten at the soup house. The disease was not transmitted through the milk or water-supply.

THERAPEUTICS.

Cultures in Serum Diagnosis.

De Rossi (*Centralblatt f. Bacteriologie*, Bd. 60, H. 3) does not agree with Ficker's view that the age of the culture has an influence on the Widal reaction, and reports cases in which the cultures have been placed in the water-bath at a temperature of 58° to 60° C. and kept there for one hour. After the addition of the specific serum to these cultures an agglutination rapidly occurred. These cultures after keeping for three months at a temperature of from 3° to 37° C. showed the same agglutinating power as the living 24-hour culture.

Prevention of Vomiting in the Treatment of Tapeworm.

Apolant (*Deutsche med. Wochenschrift*, No. 44, 1905) advises the use of menthol and sugar of milk, of each 3 grammes, to be administered before the anthelmintic in order to reduce the sensitiveness of the gastric mucosa. Black coffee, cognac, lemon juice, and oil of peppermint are also valuable. The author has employed these remedies for several years with the best results.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Intercranial Complications of Ear Disease.

Prefacing his paper with some brief statistical statements, J. F. Barnhill (*Journal of the American Medical Association*, Nov. 11, 1905) discusses the conditions of sinus thrombosis and brain abscess complicating acute or chronic ear disease. In view of the fact that without treatment these conditions are almost invariably fatal their early diagnosis is most important, and the history of earlier ear disease, though present symptoms may be lacking, should invariably be looked for. Sinus phlebitis or thrombosis may come from other causes, such as deep infections of the neck or infections of the nasal sinuses, etc., but it is most frequently the result of ear disease, which is often present. In its later stages it is easily recognized by its attending general pyemic condition, but its early diagnosis may be difficult. When, however, with persistent ear discharge and simple mastoid inflammation, the patient's symptoms seem to be more serious than the local conditions alone would warrant, Barnhill thinks that exploration of the mastoid is entirely justified, and that even if it fails to reveal sinus disease it is still a prophylactic measure of the greatest importance. Without the drainage thus afforded the possibility of sinus involvement is vastly increased. The later cerebral symptoms, together with the general pyemic condition, indicate mischief already done and calling for prompt relief. Outside the skull the occurrence of edema behind the mastoid swelling along the course of the internal jugular and edema of the eyelid have valuable diagnostic bearings, but the most characteristic symptoms are the high temperature with remissions and septic chills. Any of these symptoms occurring with persistent ear discharge or with a violently acute otitis should suggest the possibility of sinus involvement. Sinus thrombosis may be mistaken for malaria, typhoid, or acute tuberculosis, and in children for acute digestive disturbances. The differential diagnosis, however, should generally be practicable. The symptoms of brain abscess also are more or less indefinite, but the cerebral symptoms, the headache, the subnormal temperature and pulse, the exaggerated reflexes, and vomiting are rather more prominent and constant.

An abnormal irritable disposition, he thinks, has some diagnostic importance. Brain abscess may follow long-continued chronic ear disease or an acute attack. Vomiting is a prominent symptom, occurring in nearly all cases, and the eye fundus may give important evidence, as changes are noticed in about one-half of the cases. A brain abscess, however, may be latent as to symptoms and exist for a long time unsuspected. Barnhill believes that with more careful ear examinations and observation of general symptoms this would not often be the case, and the needed surgery could be done in time.

Earache.

Albert Bardes (*Medical Record*, Jan. 20, 1906) emphasizes the fact that the importance of this symptom is still not recognized as it should be by either the laity or the profession, and he discusses the nature, etiology, and symptomatology of middle-ear infections. Of the treatment, he says that as soon as earache begins the patient should be kept quiet, put to bed, and placed upon a fluid diet, and in other ways treated as we would a patient with a high fever. The bowels are to be kept open, and a single dose of morphine may be given to insure rest and comfort. Dry heat, or else an ice-bag, can be applied to the ear. The former is more acceptable to most patients. Every three hours the ear should be gently irrigated with a hot solution of bichloride 1 to 5000, after which a few drops of a 12-per-cent solution of carbolglycerin can be instilled. Under no consideration should a person be allowed to suffer pain longer than twenty-four hours. If the pain continues and the drumhead is inflamed and distended, palliative measures are worse than useless, and any attempt to abort the inflammation by means other than surgical is dangerous, and valuable time is lost in so doing. A bulging drumhead should be treated in the same way as a septic formation in any other place. It should be freely incised rather than simply punctured or allowed to break.

Mastoiditis.

Bayard Holmes (*Journal of the American Medical Association*, Jan. 13, 1906) reports a case of long-standing middle-ear disease, with mastoiditis, sinus thrombosis, and metastatic infection in distant parts of the body, treated by repeated operations,

including mastoidectomy, opening of an extensive subdural abscess containing six or eight ounces of pus, restoration of the obliterated external meatus, opening up and complete canalization of the sigmoid sinus, and restoration of the ankylosed temporomandibular articulation of the right side.

There were four operations altogether. At the first the mastoid antrum was opened and the abscess discharged; at the second, two weeks later, the mastoidectomy was completed, the external meatus opened into the antrum, and the sigmoid, lateral and part of the superior or longitudinal sinuses exposed. The third operation was done to remove the granulations from the bottom of the extensive wound and to close a defect over the mastoid remaining after the former operations. The fourth operation, ten months later, was performed to eradicate a local infection remaining at the root of the zygoma and to restore the temporomaxillary articulation, which was successfully accomplished. He remarks on the presumptive diagnosis in this case of a sigmoid sinus, a lateral sinus, and a superior longitudinal sinus thrombosis, and the unsuspected finding of an immense subdural abscess unrevealed by any clinical symptoms.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Therapy of Psoriasis.

Durling (*Deutsche med. Woch.*, 51, 1905) advocates the free use of sweat baths in psoriasis, and states that they are employed too sparingly. He has failed to get good results from the *x*-ray treatment. For local medication he advises the oil of cade, chrysarobin, and pyrogallol, and suggests testing the susceptibility of the skin to irritants before using these remedies. The internal use of arsenic, sodium salicylate, and iodide of potassium is very uncertain, and a careful regulation of the diet should be observed.

The New Method of Treatment of Acne.

Eli Moschowitz (*Medical Record*, Jan. 13, 1906) has applied Biers's principle of hyperemia to the treatment of acne and reports very good results. The procedure consists in the application of dry cups to the affected region for one-half hour, once

or twice a day. The suction must be very slight, and the cup is removed and reapplied every one or two minutes. It takes from two to five sessions for each area to effect the desired result. The method does not prevent the appearance of new pustules, although they become less frequent. Eight cases were treated by this method alone with satisfactory improvement.

GYNECOLOGY AND OBSTETRICS.

Eclampsia and Renal Disease.

P. K. Brown (*Journal of the American Medical Association*, Jan. 13, 1906) finds, from a study of hospital statistics and private records, from the literature on eclampsia and metabolism, from his own personal observations on urea elimination in pregnancy, and from experiments on animals, that the physiologic strain on the kidneys in pregnancy is such as to cause albuminuria in a large proportion (80 per cent) of cases, and that albumin and casts are found in at least 30 per cent of cases. There is no reason to suppose that the renal condition thus revealed is the cause of eclampsia, but it is likely that there is some connection between the extra-renal cause of the eclampsia and the albuminuria in view of the nearly constant association of the two. No normal end-product of metabolism nor any intermediate product, as far as known, is the cause of eclampsia, but there is reason to suppose that deficient thyroid activity plays a part at least in some cases. There are probably several causal factors working singly or together. The most significant experimental work up to this time points to the placenta as the place where the toxic substances responsible for eclampsia are formed. These same substances are probably the causes of the headache, edema, abdominal pain, and particularly the albuminuria, in non-eclamptic and non-nephritic cases. The nervous systems of pregnant women are abnormally sensitive, and their blood has been shown to be abnormally toxic. There is no conclusive proof of any increased or lessened toxicity of the urine. King's own personally conducted experiments have shown that the muscles of pregnant guinea-pigs can be thrown into convulsions more easily than those of non-pregnant animals. Two cases are reported illustrating the extreme variability of the urea elimination by the urine of women presenting pathologic conditions in pregnancy, but not having eclampsia.

Technique of Ventrosuspension.

A. Beyer (*British Gynecological Journal,* February, 1906), after full reference to the operation of ventrofixation and Kelly's operation of ventrosuspension, describes a method adopted by himself, in which no space is left between the peritoneum and the rectus muscle, the uterus in contact with the parietal peritoneum being brought firmly against the rectus muscle. The suspending silk sutures include on each side of the incision a few fibers of the rectus muscle—that is to say, a portion of muscular tissue about one-fourth of an inch in diameter. They are tied with just sufficient tension to bring the uterus firmly in contact with the parietal peritoneum, and yet not to cut through the muscular tissue. Of the patients operated upon by this method, 272 have been interviewed; 153 are now married, and of these 41 have been pregnant since operation; 37 have gone to term and borne a living child. In none of the 41 labors was there any complication which could be definitely attributed to the operation. It is, however, possible, but there is no proof, that in one case the operation was the cause of hemorrhage following labor. Nine women aborted or miscarried before the sixth month, but nine miscarriages, considering those induced, are not more than the average percentage in 153 women, for these cases represent all classes of women. In four instances the retrodisplacement recurred after operation. In three this occurred before the patients left the hospital. In two, as the result of pneumonia, the coughing caused such a strain on the abdominal walls as to sever the attachment. In the other the attachment was separated by the resident physician in removing the sutures from the cervix. In the fourth case the woman, regardless of advice, did a great deal of heavy lifting immediately on returning to her home, and the retrodisplacement recurred.

Ectopic Gestation.

William H. Randle (*American Medicine,* Jan. 20, 1906) believes that many patients die each year of so-called heart disease and other causes, when in reality the death is due to internal hemorrhage from ectopic gestation. He discusses the pathology, symptoms, and diagnosis of this condition. In cases of doubtful diagnosis a small vaginal incision may be made through the posterior vaginal vault, when the escape of free

blood will verify the diagnosis. The treatment is invariably surgical. As little anesthesia should be used as possible, and stimulation should be withheld until the bleeding point is secured. When the abdominal incision is made no attention should be paid to the enormous quantity of blood that usually gushes forth, but the surgeon should place his hand directly on the ruptured tube and clamp the bleeding parts. After this vigorous stimulation may be employed. The blood-clots may be rapidly ladled out, and the abdominal cavity flushed with a large quantity of sterile saline solution. A quantity of this fluid may be allowed to remain in the pelvic cavity. Drainage is rarely necessary, in fact it is detrimental. In all cases in which a hematocele has formed a vaginal incision may be made, with the evacuation of the clots which lie in large quantities in the pelvic cavity; but the patient should be prepared for the abdominal operation should it prove necessary because of the recurrence of hemorrhage.

The Question of Closing the Peritoneum After Vaginal Total Hysterectomy.

S. Schmetze (*British Gynecological Journal,* February, 1906) in fifty-six cases of total extirpation of the uterus by the vagina for carcinoma or myoma closed the peritoneal cavity with care. Death followed in four instances, but could not be attributed to the method of operating. His experience and the cases recorded by others show that the danger in drainage is considerably greater—from prolapse of the omentum, or of coils of intestine, ileovaginal fistulæ, ulceration of the bladder or bowels, ascending peritonitis, and especially from ileus, all of which are more surely avoided by closing the peritoneum.

Hypertrichosis Gravidarum.

Halban (*Wiener klin. Woch.*, 1, 1906) finds that in many cases of pregnancy there is a decided increase in the growth of the hair, especially the lanugo hair. This is noticed not only on the face, but also on the abdomen and the extremities. The author believes that the placenta has some influence on the sexual character, and points to the disappearance of this condition in the puerperium, and to the disappearance of the lanugo from the new-born soon after birth.

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ORIGINAL CONTRIBUTIONS.

SOME NEW POINTS IN THE ETIOLOGY AND SYMPTOMATOLOGY OF YELLOW FEVER.[1]

BY JUAN GUITERAS, M.D., HAVANA, CUBA.

Mr. President and Members of the Association:—I am very sorry that I have not a carefully prepared paper to present to the Association; but my duties in New Orleans, Pensacola, and through the South have prevented me. I can therefore only put together some rather desultory remarks concerning new points that have been brought out in the struggle with yellow fever during the present year, or by investigators in distant parts.

The French Commission from the Pasteur Institute, working in Rio Janeiro, report that they have produced a case of yellow fever by applying to a non-immune a mosquito that had been raised from eggs laid by an infected mosquito. This brings up the question of the transmission of yellow fever by the progeny of infected mosquitoes. This is entirely a new point and of great interest, as you may well imagine. We thought that we had settled this matter in Havana in the negative. Dr. Carroll, speaking for the American Commission, and myself, speaking for the work I did at Las Animas Hospital, came to the conclusion that this was not so—that is, that an infected mosquito did not transmit infection to its progeny through the eggs. Though neither the American Commission nor myself carried out any special experiments in this direction, our experience, however, in the course of other experiments shows that the mosquitoes raised from infected insects were inoffensive. As a matter of fact, the majority of the mosquitoes we had to deal with, all the stegomyias which we worked with in the laboratory

[1]Read before the American Public Health Association, Boston, September, 1905.

at Las Animas Hospital, were the progeny of infected mosquitoes. We started with infected mosquitoes and raised generation after generation from them. These were constantly fed by non-immune persons, by assistants in the laboratory, and by several men I had there ready to be bitten by mosquitoes. They were all non-immunes. We did not take any special note of this fact, but in a general way we were impressed with the non-transmissibility of the disease through the eggs to the progeny. There is, then, experimental proof of some value against the views of Marchoux and Simond, of the French Commission. Furthermore, these gentlemen have had positive results in one case alone, and as they were working in infected territory it is quite possible that this man was bitten accidentally by an infected mosquito.

There is another argument which I believe is of great importance against the transmission of the disease by the progeny. It seems to me it would have been really impossible for us to have eradicated yellow fever as we did in Havana if the views of Marchoux were correct. During the memorable campaign in that city the cases were quite often not seen until the second or third day of the disease, so that they surely had the opportunity of laying eggs before being killed; and the infected mosquitoes that were actually producing infections were laying eggs with but little hindrance, for, it must be remembered, during that campaign the reduction in the number of stegomyias in the city was scarcely appreciable. Really, if the French Commission be right, the problem becomes appalling, impossible of solution. We got rid of yellow fever in Havana very easily, and at little expense comparatively; this would have been, it appears to me, impossible if the progeny of infected mosquitoes had been also infected.

Another interesting point to which Marchoux and Simond, of the Pasteur Institute, called attention is one that has already been studied in this country. They seem to have ignored our work, or they are not familiar with it. They believe they have discovered a new source of infection of yellow fever in young children affected with mild forms of the disease. This is old. Dr. Blair of Guiana, a great student of yellow fever, Dr. Chaille of New Orleans, and myself in Key West and Havana, have shown previously that this was an important source of infection of yellow fever; that there were a great many cases of mild, unrecognized yellow fever amongst children; and that these

were frequently unsuspected sources of infection. In fact, it was a study of this problem of yellow fever in young children in the yellow fever zone that led me to call attention to and to insist upon the fact of the great danger of mild cases of yellow fever. I have been insisting upon this point for many years, not only in the case of young children, but also in adults, especially the colored population, who are apt to have mild cases of the disease. These I have always considered the most dangerous transmitters of the infection.

I shall now take up some new diagnostic signs of yellow fever. We are all convinced of the importance of an early diagnosis of yellow fever, and I wish briefly to call attention to points of interest and of importance in enabling us to make an early diagnosis even in mild cases of the disease; of course, acknowledging that there are some cases in which an exact diagnosis is not possible, with our present means, and without our knowledge of the parasite of the disease. The special symptoms we have brought out in recent work on yellow fever in Cuba, and which have been confirmed in New Orleans, are: In the first place, a high percentage of hemoglobin in yellow fever. That is a very important diagnostic sign of the disease, especially as distinguishing it from typhoid fever, malaria, and influenza, three diseases that are frequently confounded with yellow fever. In influenza, typhoid fever, and malaria the percentage of hemoglobin is low—70, 75, 80 perhaps. In malaria and typhoid fever, on the second day of the disease, you notice a fall in the percentage of hemoglobin in the blood. In yellow fever we have a high percentage of hemoglobin, very often 100, sometimes above 100, during the first three, four, and five days of the disease, and rarely below 90. If the percentage of hemoglobin should go below 80, and the case should turn out to be one of yellow fever, we find almost always some complication, or the patient has been suffering previously from malaria.

Another point has been of considerable help to me during the present epidemic, especially in Florida, where we were confronted with the existence of an epidemic of dengue, and where the question came up quite frequently as to whether yellow fever was or was not present. I refer to the diazo-reaction of Ehrlich. This is an important diagnostic sign in typhoid fever in the first days of the disease. It may be present in other infectious diseases, but I doubt if it be ever present in uncomplicated yellow fever. On two occasions my mind has been completely relieved

as to the existence of yellow fever during the past summer in the South by finding the Ehrlich diazo-reaction in the urine. I was able from my experience in Havana to exclude at once yellow fever. The Ehrlich reaction was found occasionally in severe cases of dengue.

Another diagnostic point that I wish to refer to is the albuminuria. We all know that albumin in the urine is a very characteristic symptom of yellow fever, but our judgment should be careful as to the interpretation that is to be given to the presence of albumin in the urine. After a careful study in Havana of many kinds of fever, we have found that albumin in the urine is more common in other acute infectious diseases than we thought. Albumin in the urine is common in influenza; it is quite common in typhoid fever; it is not so common, but is occasionally found, in cases of malaria. Albumin is found in the urine in cases of dengue. That is an important point. Some have been inclined to think that as long as we find albumin in the urine we have yellow fever, and not dengue.

The special point I wish to bring out is that the quantity of albumin in yellow fever is entirely out of proportion to the other symptoms present.

Let us take up the question from the point of view of dengue, which is perhaps the most interesting. If you have a patient taken sick with a temperature of 104° or more, and if the high temperature should persist for forty-eight hours or longer, you are very apt to find some albumin in the urine in dengue. But in yellow fever such temperature is indicative of severe infection. A temperature of 104°, lasting for forty-eight hours, in yellow fever, means a very grave case, perhaps a fatal case, and such a patient is sure to have a large quantity of albumin in the urine, and to be in a very critical condition about the sixth day, when the case of dengue will be getting well. A case of yellow fever beginning with such high temperatures will present the characteristic symptoms in a pronounced manner.

Let me say a few words in connection with the methods of disinfection that are being employed in New Orleans. From the beginning, understand clearly that there is a fundamental distinction to be drawn between the battle that is being fought in New Orleans and the battle that was fought in Havana. There is a fundamental difference between the two problems, and it is this: In Havana we attacked yellow fever at the beginning of the epidemic, a time when it should be attacked always. We

began our operations in February. In Havana we had an epidemic of yellow fever beginning every year in February, and increasing in March, April, and May, to the full development in August and September. In 1901 we began to attack this epidemic at the beginning of February, when there were only two or three cases. On the other hand, in New Orleans they began to attack the disease in the midst of the epidemic. This has never been done successfully, namely, to attack yellow fever and try to stop it in the midst of a great epidemic. But it has been done in New Orleans, and with wonderful success. The epidemic has been checked; it has been brought to a standstill, although the authorities had to attack the epidemic under such unfavorable conditions in the midst of a very large non-immune population, probably the largest that was ever exposed to yellow fever within the limits of a city. New measures were therefore necessary to meet the circumstances and exigencies of the epidemic. In New Orleans they have attempted to destroy all mosquitoes in the city. They are disinfecting all houses, whether infected or not; they are fumigating all houses, whether they contain infected mosquitoes or not. Housewives have taken charge of this. It is perhaps the only way to deal with the disease under the conditions prevailing in New Orleans.

In Havana, on the other hand, we did not fumigate any houses except those that were infected. We applied the specific measure for the treatment of epidemics of yellow fever: we killed the infected mosquitoes, and no others—that is, mosquitoes about the patients, and those which were supposed to have bitten patients.

Now is it necessary to follow the example of New Orleans? I am a little doubtful. I know that we are not able as yet to draw conclusions, but I was rather impressed with the fact that the attempt to do this great thing of disinfection of a city, of killing mosquitoes everywhere, rather weakened action against infected mosquitoes. A great deal of energy was spent in fumigating the whole city that perhaps might have been better employed if concentrated upon the infected mosquitoes only.

Another thing noticeable was that after this great display of energy on the part of the people it was rather discouraging to find that no immediate results followed. The fever did not disappear rapidly. It was very discouraging, and there was an inclination to cast some doubt on the efficacy of the mosquito doctrine. The final success, however, may justify the process.

Another point to which I desire to call attention as new in the struggle against yellow fever is the use of steam under high pressure for the destruction of mosquitoes. That has not been used heretofore. The method was suggested and carried out by Dr. Berry, of the Marine Hospital Service. A fire engine was brought to the houses to be disinfected, and in certain places which were difficult to seal, as in courtyards and in stairways, a jet of steam was thrown against the walls and about the locality. In this way many insects were destroyed by the direct action of the superheated steam and by the force of the stream mechanically. That is an interesting departure.

Coming to one of the suggestions that were made by Dr. Carroll, as to the existence or appointment of a commission to make a diagnosis of yellow fever, no more important suggestion can be made, and I wish to speak decidedly in favor of it. It is the plan we have adopted in Havana, especially under the government of General Wood, in Dr. Gorgas's time. We had such a commission then, and it is still in existence. This commission visits all cases of suspicious disease, and the opinion of the commission is final as to whether a case is one of yellow fever or not. There is, however, something more important than this commission, and that is the general education of the people. Take, for instance, such a commission as Dr. Carroll wishes to have appointed. Do you know what would have happened in New Orleans early this spring or this summer if there had been such a commission? The commission would not have been called in to see the suspicious cases. They would have been afraid to call it because the people were not properly educated. It is necessary to educate the people, so that the appearance of the first case of yellow fever may be reported at once without causing any excitement. Then, and only then, will capital cease to object to the timely reporting of cases of yellow fever.

It is to be regretted that some commercial interests in the South have thought that it was to their advantage to create the impression that yellow fever had made its appearance in Havana. For a while they succeeded in frightening Galveston and Mobile into quarantining against Havana. It is a pity, because Havana stood as a great object-lesson to the South, and just when the South was beginning to believe in, and profit from, this lesson, these foolish people have raised a cloud of doubt around the brilliant results that have been obtained, and are obtaining, in Havana.

MAIEUSIOPHOBIA, WITH ESPECIAL REFERENCE TO RACE SUICIDE.

BY Q. W. HUNTER, M.D., LOUISVILLE, KY.

Despite the fact that maternal love of offspring constitutes one of the strongest human attributes, it is probable that from time immemorial the average female adherent to the genus homo has in some degree possessed an abhorrence of the process of childbirth. While the reason therefor in ancient times may be incapable of intelligent understanding or reasonable explanation, the so-called advanced civilization is unequivocally responsible for this as well as many other modern physical and moral feminine obliquities.

The morbid dread of motherhood engendered by the prevailing attitude of society toward what it denominates the "degradation of exalted womanhood" (*i.e.*, pregnancy and parturition) is sometimes sufficiently intense to prevent desirable matrimonial alliances. On the other hand, however, the fact must not be permitted to pass unobserved that fear of possible impregnation constitutes practically the sole safeguard against promiscuous *congressus sexualis* among certain classes; in other words, the apprehension that a compromising pregnancy may be the ultimate outcome of clandestinely tasting the forbidden fruit, rather than an intelligent discrimination between legal, moral, or ecclesiastic right and wrong, is the primary incentive to continued feminine refusal to acquiesce in proffered sexual embraces.

It is believed the statement can be substantiated that society distinctly errs in presuming, as it apparently does, that the influence of superstition (religion) and ignorance (innocence) is sufficient to insure conservation of the adolescent female along the straight and narrow path of enduring virtue; and that prevailing social impressions concerning other propositions of sexuality are also equally erroneous can be easily demonstrated by investigation and inquiry. A marked tendency exists in polite society to condemn one of its female adherents for the slightest transgression of its false edicts, to quickly and permanently ostracize and brand her an "outcast" because of a single false step, when it (society) is more often than otherwise directly responsible for her downfall. Consistency, thou art indeed a jewel!

The childish attitude of society on all questions appertaining to sexuality is "Thou shalt not!" The mere mention of the procreative organs, or of anatomical structures intimately or

remotely associated therewith, is strictly forbidden within the gilded circle. Even in scientific nomenclature the *partes generationis* are erroneously denominated the "pudenda" (something of which one should feel ashamed); and among the ultra-fashionable laity who has not heard of the "limbs" of a piano and the "limbs" of tables, chairs, etc.? In conformity to social custom the truths of human genesis have ever been submerged in an avalanche of ambiguity, subterfuge, and deceit, and modern society considers prurient any inclination or attempt on the part of its devotees toward education and progressive higher enlightenment. Such, then, is the prevailing attitude of society toward the strongest passion (sexual) which dominates the human will, and therefore one it would be better to thoroughly understand and adequately appreciate!

The modern daughter is instructed by an unwise "society" mother that while marriage is a consummation devoutly to be wished, maternity is an eventuality horrible in its contemplation, that it is an unmasked insult to exalted womanhood, a crime degrading and debasing in its significance, which must not be tolerated. Thus there is early engendered a morbid fear of pregnancy and childbirth which effectually destroys anticipation of normal sexual intercourse, the act being approached with abject repugnance and disgust, and therefore the acme of conjugal felicity, normal *congressus sexualis matrimonii,* forever remains an unknown quantity. It is but a step further to obliteration of the love of offspring, to neglect of husband and loss of interest in home surroundings, to physical, moral, and sexual degeneration.

The American club woman, says Philo, is a stranger to her children (if, perchance, she has any), and her poodle is the object of more caresses than either her children or her husband; that cradles, as well as that for which they were intended, have gone out of style; that children to-day are more often the accidents of nature than the fruit of conjugal love and fidelity!

Statistics furnished by city health departments show a progressive diminution in the birth-rate, especially among the affluent and well-to-do classes: *e.g.,* it is said that during 1905 only thirteen children were born on Fifth Avenue (New York) between Washington Square and Ninety-fifth Street (a distance of four miles), and that similar conditions obtain in other fashionable districts of New York, Chicago, and other large cities.

There is another aspect more far-reaching and disastrous in

its significance which will bear emphasis. It is not unknown that daughters have been openly instructed by modern mothers in the art of inducing abortion; moreover, mothers have actually furnished daughters the requisite instruments with minute description of the modus operandi by which the operation may be successfully performed, with the further suggestion that should perchance such measures prove ineffective, there still remains recourse to the *dernier ressort*, the infallible Doctor Blank. In the majority of instances such a mother has borne but one or two children (these perhaps by accident?), the preventive procedure recommended to the daughter having been practiced upon herself on numerous occasions with or without unfavorable immediate or subsequent after-effects.

The moment a female contemplates becoming a bride she either seeks or has thrust upon her a hundred remedies or devices to prevent conception. Prescriptions that have been heirlooms, with verbal testimonials from each married female member of the family, are shown her, and she takes copies thereof. One married friend may suggest cold douches after each act of copulation; another may tell her of the priceless value of the womb veil, etc., etc. (Weaver).

If it is a detestable thing to prevent conception, *a fortiori* is it so to destroy that which has been already conceived, and the abortionist and the cephalotripsist morally fall under the same ban. It does not invalidate this argument to say that the mother's life is in danger, and that she will perish unless the fetus be removed or craniotomy be performed. The child has a right to be born; it is not an aggressor, it took no part in the sexual congress which resulted in its existence. There is no law which compels a woman to have children unless she submits herself to the process by which they are engendered. Whether this sexual congress was licit or otherwise, the embryo is a *de jure* as well as a *de facto* issue of a concurred act, the legitimate dweller of precincts which nature provided. It is therefore neither an invader nor an intruder, and the responsibility of its *fiat* and subsequent *ego* reverts to or rests with the authors of its conception. . . . There is now a practice so universally in vogue that it may be well termed a national vice, so common that it is now openly acknowledged by its perpetrators, for the commission of which the physician is even eulogized by his patient and applauded by his friends and colleagues. It is artificial abortion! (Van Goidtsnoven). Husbands seek it for their wives; libertines ask it for their mistresses; seducers seek

it for the unhappy victims of their licentious passions; wives—aye! mothers even—beg it for themselves; and physicians there are who advise and practice it not only as a *dernier ressort,* but as an expeditious means of relieving nausea and vomiting in pregnancy, and therefore call it justifiable (Swayne).

Juvenal says that few children are born in the gilded bed to the wealthy dame, so many artifices has she and so many drugs to render women sterile and destroy life within the womb! And according to Le Beuf statistics show that our race productiveness has been reduced from eight children per family to two and one-tenth inside of one hundred years; the voice of experience teaches that prevention (of conception) is always an unnatural state, in whatsoever form used, leaving some pathologic results to the principals in the act, either physically or in the deteriorating psychic effect in the abstract on the mental condition of the participants—*i.e.,* in durability of affection influenced by the perversion of the *vicæ naturales* which have been abused. . . . When we come to the second cause of curtailment of race expansion, the destruction of the fetus proper, it is then a very different matter. . . . Outside of the laws of the land, which protect the living as well as the unborn, is there not something further which cries out for the innocent soul, defenceless and unprotected, swimming in its thin, weak fetal membranes? The law of fair play, the manly cry of honor, against the heinousness of crime? . . . In Europe individual fecundity shows four or five children to each marriage, in America a little over two children to each family. . . . The fecundity of American women has diminished to an astounding extent in spite of the high state of the practice of obstetrics and gynecology, in spite of aseptic medicine and the universal practice of better midwifery by younger practitioners, the more familiar use of the forceps, the knowledge of symphyseotomy and aseptic Cæsarian section, without mentioning the better control of eclampsia, placenta previa, and the management of the new-born. . . . Our population would be at a standstill were it not for our immigration and the prolificity of the foreign-born. A married woman from an adjacent city said that she, together with twenty of her intimates, consisting of the most select members of the 400 of that city, used a special infallible preventive known to them, and they restricted their family successfully to one or two children (Le Beuf).

Man's physical nature is inseparably correlated with the moral, so that he hopes to ascend to a higher and nobler life,

and undergoing a secret growth while he is a dumb and unseen embryo, he is by degrees being shaped and perfected for the loftiest estate of any created thing of which we have knowledge. That this hope should be blighted, that the precious life of the defenceless human being should be snapped asunder, by violent expulsion from its natural place of lodgment, is an outrage which nature punishes by calamities to the mother both physical and moral (Weaver).

Could we but lift the veil that conceals the many premature graves, the shattered lives and desolate or disrupted homes—homes from which the bright smiles have disappeared forever, and in their stead reign desolation, sorrow, and vain regrets—a desolation that all the wealth and honor of the world can never satisfy—a sorrow that can never be appeased—regrets that no amount of sophistry or excuses can remove or mitigate: could these things be presented in the noonday glare of all their physical and moral hideousness, how soon would the aroused conscience of a moral Christian people drive to their proper place behind the prison bars the vile hags that suggest this crime (criminal abortion) to young women, teach them how to commit it, or do the foul work themselves; or those still worse vampires who wear the livery of an honorable profession to cover their infamous practices, not to say anything of the base, conscienceless libertines who assist in the accomplishment of this nefarious work, and at the same time retain their so-called exalted social positions! (Stuver.)

The results of this pernicious, inhuman proceeding (criminal abortion) are so well known and understood by those engaged in reputable medical practice that detailed comment seems unnecessary. The first attempt to induce abortion may or may not be entirely successful, but the family physician is more often than otherwise consulted for relief of after-effects. And the statement applies with equal force whether the attempt be made by the woman herself or by a professional criminal abortionist, since following an induced abortion, provided the woman survive the operation, after-treatment usually becomes imperatively demanded. However, the ultimate object has been attained—*i.e.,* pregnancy has been interrupted, the degrading, debasing childbirth has been obviated, exalted womanhood has escaped the insult—even if the commission of cold-blooded murder were necessary to its accomplishment!

The outcome is not always so satisfactory. It not infrequently happens that the woman perishes from immediate or subsequent

complications or sequelæ; thus two human lives are wantonly sacrificed, the one innocent, the other relatively guilty, while the principal *particeps criminii*—the criminal abortionist and the mother who was responsible for the original suggestion—are permitted to go their way uninterrupted and unpunished.

Should the woman survive repeated abortions, the resultant unstable neurotic condition, superadded to the physical and moral degeneration which such unnatural processes induce, almost invariably renders her thereafter incapable of carrying a fetus to normal term, if indeed irrevocable sterility be not thereby produced. To repeat, however, from the view-point of society, it appears to matter little what may be the physical, moral, or psychic result, the ultimate object has been attained: childbirth, which is stigmatized a crime and rank insult to womanhood, has been avoided!

It would seem that modern feminine mentality has become imbued with the idea that the dangers incident to induced abortion are infinitely less than those attending the termination of normal pregnancy by accouchement, whereas the converse happens to represent the actual truth. Few women perish as a direct result of normal childbirth, provided the accoucheur be even ordinarily careful in the exercise of aseptic and antiseptic precautions; moreover the maternal mortality is extraordinarily moderate amid most unfavorable and even distinctly unhygienic (septic) surroundings. *Per contra*, the death-rate following criminal abortion (self-induced or otherwise) is notoriously high, the reasons for which are too well recognized and appreciated to require repetition. Abortion is labor in miniature, at least so far as it relates to the expelling organ and to the expelled product; but not in miniature in regard to the duration of the process and the attendant suffering (Parvin). According to Jardien, in thirty-four instances of criminal abortion, where the histories were followed, twenty-two of the women perished; and Tardieu states that in one hundred and sixteen similar instances sixty of the women died. It is an every-day occurrence for women to consult gynecologists in large cities in regard to symptoms which upon inquiry are found to date back to an unfortunate abortion; it would be quite within the limits of truth to state that two-thirds of the work of modern gynecologists finds its chief cause in this evil (Johnson).

Many will doubtless be surprised to learn that criminal abortion is practiced much more frequently among the married than the unmarried. Here indeed is a perversion of nature! Maternal sympathy, care, and tenderness are withheld, and harm is plotted

for the child by the mother, who has failed to do her duty. The parents who have sworn to the obligations of wedlock, conspire to kill their child, while the lioness will bleed and fight to the death for her cub! The rough hand of the uncouth savage becomes soft to his babe; motherhood among all higher animals means care and tenderness, self-sacrifice and love; but the degeneration found in some phases of social life, which replaces ethics and religion with lust and lasciviousness, has given to the world a most perverted type of nature's craft (Weaver). It is believed that from seventy-five to ninety per cent of criminal abortions are performed upon married women (Scott).

To so great an extent is abortion practiced by American Protestant women that by calculation based upon correspondence with nearly one hundred physicians there came to the knowledge of the profession seventeen abortions for every one hundred pregnancies; to these the committee believe may be added as many more that never come to the knowledge of the physician, making thirty-four, or one-third of all cases ending in miscarriage; that in the United States the number is not less than one hundred thousand, and the number of women who die from its immediate effects not less than six thousand per annum (from report of special committee on criminal abortion, Michigan State Board of Health). It is claimed that in the city of Chicago alone sixty thousand abortions were procured during a single year.

If we do not all believe in a soul destroyed, we can at least agree on the offense; this crime is against nature, against the law, and against society. We all love our country, her institutions, and her people, and wish to see them preserved. Look at many of the eastern towns with so few children in their schools; look at the smallness of the average American family; look at our gynecological records, at the ruined homes and crippled women; look at our rapidly decreasing birth-rate—and then ask, have not all upright physicians sufficient ground on which to unite to stamp out this murderous crime which is prostituting our noble profession and demoralizing the country's social life and purity? (Evans.)

Thus it will be observed that the sociological importance of the morbid dread of childbirth becomes absolutely immeasurable when considered in connection with its constant companion, criminal abortion. However, the fear of motherhood and the dread of responsibilities it entails is only one of the incentives to criminal abortion; there are multitudes of additional causes and excuses therefor the consideration of which, *in extenso,* would fill a volume.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

CONTRACT PRACTICE, THE LODGE DOCTOR, AND SIMILAR PROBLEMS.

There is rarely a month in which these matters are not discussed editorially, or in some other way, in at least one of our exchanges. Generally speaking, contract practice is regarded with disfavor, and the ethical standing of the contract physician is, at least, a questionable one. Nevertheless, it seems to us that it is rather the individual circumstances attending such practice than the general scheme which is at fault. Contract practice by a regularly commissioned medical officer of the government, or even by an appointee of a city, town, or county, with the object of looking after applicants for public charity, is not usually frowned upon. Yet the principle is essentially the same as for lodge practice.

It seems to us a matter of sound economics for any corporation, employing large numbers of men requiring medical examination as to their fitness for work, or liable to incur serious injury, to employ a medical attendant at a fixed salary. So, too, a fraternal and benevolent association of poor men, or of poor men and women, may very reasonably insure against the expense of sickness, childbirth, and injury, as well as include in their general expenses any other form of insurance.

The essential point on which the ethical nature of the contract depends is the adequacy of the compensation. In all such considerations it should be borne in mind that the general equity of securing wholesale rates is not to be questioned, although, obviously, the rate should not be fixed so low as, on the one hand, to compete at an unjust level with ordinary professional fees, nor, on the other hand, to imply the employment of an incompetent physician. It must also be remembered that, in

general, the class of persons for whom any kind of contract practice is instituted is unable to pay more than the minimum fee, and not even this if the attendance is prolonged or of an unusual nature.

The general advantage of "old-line" as compared with social insurance companies occurs to us as a possible basis of sick and accident insurance. Indeed, such a company has been organized in Canada, but its workings, at least as introduced into the United States, were not satisfactory. Aside from the salaries of government, including local health officers and practitioners, insurance fees, etc., the average professional income for the whole country is commonly estimated at about $1000, or an aggregate of not over $125,000,000. A per capita tax of $2 per year would be within the reach of all except the very poorest, and could be paid for them by the appropriate government. Even at this low rate the medical profession would be better paid than at present. Unless the statistics of medical incomes are incorrect, and as such a tax would scarcely apply to consultations, services of specialists, and the fees of the well-to-do class, the medical profession would really be much better recompensed than at present. Of course, it would not be feasible to institute such a plan under our present governmental conditions.

Some such plan as the following, however, seems to us to be well worth the serious consideration of the medical profession and business men: Organize an insurance company to provide for ordinary general practice attendance, exclusive of major surgery and well recognized special services and consultations, at a rate of say $5 per capita, insisting upon a preliminary examination or investigation to exclude those already actually sick. Provide for a nominal office and visiting fee, inadequate in itself, but sufficient to guard against unnecessary calls simply for the sake of getting some immediate return for the premium. Either apportion the families and individuals in units of, say, 500 or 1000 for each physician, or else provide a corresponding number of general practitioners in each locality and pay each one according to the services actually rendered by him.

Such an arrangement would appeal to the average self-respecting poor man; the expense would be within his means and would represent, considering the risk of needing prolonged attendance and the ability to obtain all necessary attendance, a genuine economy to him, and would still result in a greater average professional income, while it would not seriously interfere with the rights of medical men who preferred the uncertainties

of private practice, at more liberal fees, either in specialties or in consultation practice and general practice composed mainly of wealthy families.

While such a scheme, like any other plan of insurance, might be grossly mismanaged, we can see no reason why such mismanagement would be essential. It would also, in a very practical manner, strike at the root of the present evils of contract practice. It seems plain to us that the existence of contract practice, of which physicians make the complaint that it is unfair and inadequately paid, depends essentially upon an oversupply of physicians. It has been well demonstrated by actual experience that this economic factor cannot be satisfactorily remedied by legislation demanding a higher standard of requirements. So long as the practice of medicine is open to any one complying with the requirements, and at any location, and so long as financial success in medicine depends upon the personal magnetism necessary to draw a sufficient following, every aspirant imagines that his own case is exceptional and that he himself will succeed. If it were plain that the places were actually filled, so far as the great mass of the population was concerned, and in regard to general practice, which is the immediate opportunity of the vast majority of aspirants, we doubt very much whether there would be the present tendency to crowd into an overful profession without regard to obvious economic conditions.

EDITORIAL NOTES.

The Use of Gloves in Obstetrical and Gynecological Work.

The use of gloves in surgical and gynecological work has of recent years become quite prevalent. Some authorities, however, have contended that they do not afford the protection supposed. Some time ago an Italian surgeon, V. Caliri, made a number of careful experiments as to the value of the different methods of sterilization that may be used in preparing the gloves. He says that nearly all disinfectants, corrosive sublimate excepted, do not so thoroughly disinfect that broth cultures of various microorganisms may not be obtained from them. Two methods are successful: that of washing the gloves for a few minutes in soap and water, and using a one-to-one-hundred solution of corrosive sublimate, and that of live steam in an autoclave. He found that alcohol was unsuccessful, owing to the fact that the gloves

were injured by its use. He also experimented as to the injury to the gloves by the disinfection, and found that all except the soap and water method rendered the gloves softer and made them permeable to bacteria. Caliri concludes from his experiments that notwithstanding their disadvantages gloves should be used by all assistants at an operation except the surgeon-in-chief, these gloves covering the entire hand and forearm. He is of the opinion that the operating surgeon should leave the last two phalanges uncovered in order to aid him in feeling the parts operated on.

A New Definition of the Practice of Medicine.

From time to time some wise man elects to define the practice of medicine, and many and queer are some of the definitions that we have heard in times past. The latest Solomon to add to the already accumulated store of definitions of what medical practice consists is Judge Deuel, of *Town Topics* fame. This eminent legal light recently handed down as his opinion that the practice of medicine consisted of three things—diagnosis, discovery of the cause, and the cure by drugs—and that if a doctor did not prescribe drugs he was not practicing medicine. This opinion will doubtless be made much of by the osteopaths in their efforts to have that so-called science legalized. However, as Judge Deuel has been so recently shown in such an unenviable light through his connection with *Town Topics,* his opinion will not carry as much weight as it otherwise might.

An Age Limit for Professors.

The question of retiring college professors on the attainment of a certain age was thoroughly discussed in this country only a short time ago. In Germany there is no age limit. The question of fixing such a limit is now being considered by the Cultusministerium. Views are being exchanged on the subject between the ministry and the universities. In academic circles the proposal that professors shall relinquish their chairs on reaching the age of seventy years is said to find favor. The plan of retiring university professors at the age suggested is one that ought to be universally adopted. Too often do we see veterans who lag superfluous on the stage standing in the way of younger and more energetic men. Any man who works up to the age of three score and ten ought to be allowed to rest for the remainder of his days.

ITEMS AND NOTES.

Dr. Geo. S. Hyde has bequeathed $50,000 to the Harvard Medical School.

The steady increase of insanity, says the *Hospital,* during the last fifty years is one of the most alarming of all adverse conditions of the public health.

The American Association of Railway Surgeons will hold its first meeting at the Northwestern University Building, Chicago, October 3, 4, and 5, 1906.

Prof. William H. Welch, of Baltimore, has been elected a member of the Board of Trustees of the Carnegie Institution, in place of the late Secretary of State Hay.

It is reported from Boston that Prof. H. C. Ernst, of the Harvard Medical School, has devised a new method of photographing unstained bacteria by means of ultraviolet rays.

An epidemic of smallpox has closed the public schools of Port Walthall and Chesterfield counties, Virginia; they will remain closed until all the children have been properly vaccinated.

A smallpox epidemic of some magnitude has broken out in the neighborhood of Owensboro, Ky., and the local authorities are said to be having much difficulty in enforcing quarantine regulations.

A bulletin issued by the Interstate Commerce Commission shows that during the months of July, August, and September last 1053 were killed and 16,386 injured among passengers and employees of steam roads in the United States.

The death-rate from pulmonary tuberculosis in England and Wales during the years 1903 and 1904 are of interest. For 1903 the death-rate per 1,000,000 was 1203; for 1904 it was 1236; but the latter figure is given subject to correction.

Mr. Wilson, the junior surgeon on the *Discovery* during Capt. Scott's antarctic expedition, states that the taste for alcoholic drinks dropped suddenly when he and his colleagues entered the ice region, and that the disinclination increased as time went on.

Dr. T. E. Crothers, of Hartford, Conn., has sold the *Quarterly Journal of Inebriety* to Richard J. Badger, of Boston, Mass. The journal is the official organ of the American Society for the Study of Alcohol and Other Narcotics. Dr. Crothers will still continue to edit the journal.

The new military hospital which is to be erected in the District of Columbia will be called the Walter Reed United States Army General Hospital, in honor of the late Major Reed, whose name is so closely associated with the final proof of the transmission of yellow fever by mosquitoes.

Members of the German Reichsrath, representing the most widely different political parties, have introduced a bill into the chamber providing for the allocation of a sum of $25,000 to Professor Neisser, of Breslau, for further investigations on syphilis in the light of recent researches.

We learn from a contemporary that the annual summary of deaths among physicians in the United States and Canada shows that during 1905 there was a total of 3045 as compared to 2142 in 1904, a rate of 16.36 per 1000. This differs but little from the rate for preceding years, though slightly less than in 1904.

In connection with the Sixth International Congress of Criminal Anthropology, which is to be held at Turin in the latter days of April, Professors Cesare Lombroso and Romeo Fusari are organizing an exhibition which is intended to be a "plastic documentation" of everything relating to crime and criminals and scientific police.

An international exposition, in which discoveries and inventions relating to medicine and hygiene will have a prominent place, is to be held at Antwerp in April and May of the present year, under the patronage of H. R. H. the Countess of Flanders. Communications should be addressed to the secretary's office, 26 Rue d'Arenberg, Antwerp.

The Supreme Court of Alabama upholds, says an exchange, the Pullman Car Company's right to exclude from its coaches persons suffering from contagious or infectious disease. The decision of the Supreme Court was in the case of the Pullman Car Company *vs.* Max Krauss, appealed from the city court of Birmingham. Krauss claimed $2000 on account of his removal from a Pullman coach. He gained a victory in the lower court, and this was reversed and remanded.

A BILL will be introduced at this session of the English Parliament which is intended to suppress cigarette smoking by children. The draft of a measure has been prepared which prohibits the sale of cigarettes to children under sixteen, and makes any child under sixteen found smoking any kind of tobacco liable to conviction and punishment. Sir William Broadbent is one of the supporters of the measure.

THE first statue of Queen Alexandra on English soil will be erected in the grounds of the London Hospital, to commemorate the completion of the rebuilding operations, which have cost $225,000. The sculptor will be George Wade, and the statue, which will be of bronze, will be of heroic size. It will cost $7500, and of this sum $6500 has been subscribed already by the committee, the staff, and a few personal friends.

THE Department of Pathology and Bacteriology of Indiana University, Bloomington, Ind., announces that the position of research assistant in serum pathology in Indiana University for 1906-1907 is open for applicants. Candidates must have completed at least two years' work in a medical school of high grade, and must have a fair knowledge of bacteriology, of general pathology, and of volumetric and gravimetric methods of quantitative chemistry. Preference will be given a medical graduate.

THE remodeled Willard Parker Hospital and the new laboratory building in New York have been formally opened. The laboratory is considered one of the best equipped in the country. It is expected that much will be accomplished in the study of antitoxins. Already two substantial advances have been made. One of these makes it possible to ascertain within twenty minutes whether a suspected dog has hydrophobia. The other achievement has been in refining and concentrating antitoxin, which has been highly successful.

THE reduction in the amount of typhoid fever is the most remarkable fact in the sanitary history of Chicago during the last decade. The weekly bulletin of the health department reports that the mortality there from typhoid fever during the ten years from 1885 to 1894 inclusive was 7.9 per 10,000. In 1891 it was 17.31, being greater that year than in any other city in the civilized world. After the drainage canal and intercepting sewers were built the typhoid mortality was reduced in the decade from 1895 to 1904 inclusive to 3.2, and in 1905 it was 90 per cent less than it was in 1891.

In response to a suggestion from the National Association for the Study and Prevention of Tuberculosis, President Roosevelt has appointed a committee to investigate the sanitary conditions existing in the government offices and workshops, with a view to recommending measures for the prevention of tuberculosis. The members of the committee are: Surgeon-General Robert M. O'Reilly, of the U. S. Army; Surgeon-General P. M. Rixey, of the U. S. Navy; and Surgeon-General Walter Wyman, of the Public Health and Marine Hospital Service.

At the partial election held last month to fill up 103 vacancies created by the retirement of members or by death in the French Senate, ten seats were gained by medical men. These are Drs. Aubry (Constantine), Daniel (Mayenne), Flaissiere (Bouches-du-Rhône), Lannelongue (Gers), Lourties (Landes), Petitjean (Nièvre), Rey (Lot), Reymond (Loire), Sancet (Gers), and Viger (Loiret). Of these six now enter the Senate for the first time. Before the election there were forty-two medical senators; now there are forty-four. Three former members did not stand again, and one has died within the last six months.

Among the members of the medical profession in foreign countries who have recently died are Dr. Nikolai Kotoffschtschikoff, emeritus professor of therapeutics in the University of Kasan, aged sixty; Dr. L. Schuster, of Aix-la-Chapelle, well known as a neurologist and dermatologist, aged seventy-eight; Dr. Zielenziger, of Potsdam, held in high esteem as a medical practitioner, and well known in a larger sphere as a poet, aged eighty-five; Dr. Frederich Kerschbaumer, a well known ophthalmic surgeon of Ischl, aged fifty-eight; Dr. Giuseppe Casarini, some time professor of pathology in the medical faculty of Modena; Dr. Rogman, a well known ophthalmologist of Ghent; and Dr. Emil Schnee, the oldest physician of Carlsbad, aged seventy.

A child recently died in British Columbia from an overdose of a patent medicine, and the result has been to call the attention of the Dominion government to the fact that there is no law at present on the Canadian statute books authorizing the Department of Inland Revenue to take any proceedings against the manufacturers of patent medicines who use harmful ingredients in making up their medicines. Pressure is being brought to bear upon the Federal government, and the matter is now receiving the attention of the officials of the Inland Revenue Department,

under whose direction analyses of a chemical character are from time to time carried out. In the meantime, as a preliminary, the department will instruct its analyst to make analyses of several of the best known patent medicines in Canada, and the future action of the department and of the government will largely depend upon the results of these analyses.

THE congresses dealing with matters directly or closely allied with the science and art of healing to be held this year are as follows: In March the German Balneological Society will hold its twenty-sixth annual meeting in Dresden; in April the German Congress of Internal Medicine will hold its twenty-third meeting in Munich; while the German Surgical Society will hold its thirty-fourth, the German Orthopedic Society its fifth, and the German Roentgen Society its second annual congress in Berlin. In the same month will be held the International Congress of Anthropology in Monaco, the fifteenth International Medical Congress in Lisbon, the sixth International Congress of Criminal Anthropology in Turin, the Congress of Experimental Psychology in Würzburg, the International Congress of Applied Chemistry in Rome, and the Congress of Scientific Societies in Paris. On the last day of April the Congress for the Repression of Unqualified Medical Practice will meet in Paris. In June an International Congress on Industrial Diseases will be held in Milan, and the French-speaking practitioners in Canada will hold their third annual meeting at Trois Rivières. In August the British Medical Association wil hold its seventy-fourth annual meeting in Toronto. In September the third International Congress of Medical Electrology and Radiology will be held in Milan, where, too, will be held a national congress on pellagra and the means of checking the ravages of that disease, and an international one on the treatment of the insane. In the same month the fourth International Congress on Life Assurance in its Medical Relations will take place in Berlin, the tenth Anti-Alcohol Congress will be held in Budapest, and a Congress on Cancer in Heidelberg. In October the French Congress of Surgery will be held in Angers, and in the same month the Italian Congress of Internal Medicine will be held in Rome. The German Association of Scientists and Medical Practitioners and the British and French Associations for the Advancement of Science, each of which has one or more sections concerning itself with medical science, will be held as usual in the summer and autumn.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Differential Diagnosis of Appendicitis and Gynecological Disease.

A. Bollenhagen (*British Gynecological Journal*, February, 1906) referred to the frequency of appendicitis and to the number of abdominal affections in women which, from their great similarity to appendicitis, might be confounded with that condition. In this possible error there were several factors: for instance, the anatomical position of the processus vermiformis, which was frequently attached not only to other neighboring organs, but even to the uterine adnexa themselves; moreover, owing to the uncertain seat of the processus vermiformis, the symptoms, even the seemingly characteristic pain of appendicitis, could not be looked upon as definitive, since pains arising in the genital organs might be referred to the same place. The differentiation, if possible at all, became so only by means of bimanual palpation, and it must be remembered that neither the appendix nor the genitals might be in fault, but something else, such as a wandering kidney.

Of the gynecological diseases which may erroneously be diagnosed as appendicitis, the following are the most important: (1) Torsion of the pedicle of an ovarian tumor, a condition in which adhesions are very frequent, especially in small tumors of the right ovary; (2) interrupted extra-uterine pregnancy; (3) and most of all, inflammatory affections of the true adnexa, in which during the acute stage a sure diagnosis is hardly possible, and one has to depend entirely upon the anamnesis. Even in recurrent cases, in which one may have to do with adnexal tumors of some size, the diagnosis is sometimes uncertain, for voluminous pyosalpinx may lie high up in the abdomen. In chronic cases the difficulty is not so great, though even then there may be coexisting disease of both organs. Combined examination is especially important, for nothing certain can be known from the symptoms alone. It is remarkable how often palpable lesions may be found in the right adnexa, to which the pains complained of in the supposed inflammation of the cecum, etc., may be referred with certainty. Combined examination is the more important, as by it

one may sometimes discover an exudate or other lesion in Douglas's pouch, and be able to deal with it, in a simple way, from the vagina.

Transplantation of Veins and Organs.

A. Carrel and C. G. Guthrie (*American Medicine,* Dec. 30, 1905) obtained the reversal of the circulation in the jugular vein, in the carotid artery, in the arteries and veins of a limb. Important anatomic changes of a transplanted venous wall soon occur under the stimulus of the increased pressure. The thigh of a dog was completely amputated and afterward replanted by suturing the vessels, the nerves, the bones, the muscles, the aponeuroses, and the skin. The pulsations of the popliteal and the posterior tibial arteries immediately became normal, and the femoral vein filled with dark blood. A kidney was extirpated and transplanted by anastomosis of the renal artery to the carotid artery and the renal vein to the jugular, and the ureter was made to open into the lumen of the esophagus. On the third day after the operation the kidney was directly examined. Its circulation was found normal. A good excretion of urine was going on. The thyroid gland was extirpated and replanted with reversal of the circulation. On the ninety-fourth day after the operation the gland was found to have a good circulation.

Prostatic Albuminuria.

Edgar G. Ballenger (*New York Medical Journal,* Feb. 24, 1906) says that the secretion from a hyperemic or an inflamed prostate is albuminous, while that from the normal gland is not, or is present in such a small quantity that unless the seminal vesicles are massaged the urine passed will not give the tests for albumin.

This is apparently a constant symptom of chronic prostatitis, and may be depended upon in the diagnosis.

Prostatic albuminuria seems to be an appropriate name for this condition.

In making insurance examinations as well as in the diagnosis of obscure forms of albuminuria this possibility should be eliminated, with the other sources of contamination, before reaching a positive conclusion as to the significance of albumin.

The periodic increase in the prostatic discharge, along with the striking similiarity between the symptoms of intermittent

postural, orthostatic, and cyclic albuminuria, and prostatorrhea, makes the possibility of mistakes in the diagnosis extremely likely when this fluid flows back into the bladder and does not appear at the meatus.

This regular increase every ten to thirty days and the analogy between the uterus and the prostate suggest a relation between the causes of this condition and menstruation.

Fatal Hematemesis the Result of Chronic Gastric Ulcer.

F. H. Murdoch (*American Medicine,* Jan. 6, 1906) reports the case of a man of forty in which a diagnosis of chronic gastric ulcer was made. After living on liquids for two months he was able to take solid food without discomfort. He had good health for two years after this time; then began having pain two or three hours after meals, which was relieved by sodium bicarbonate. In May, 1905, he had pain immediately after the ingestion of food referred to the left hypochondriac region; it was not relieved by either sodium bicarbonate or orthoform. Soon vomiting appeared as a new symptom, then hematemesis, which continued at intervals till his death in September, 1905, six years after he first saw him. Adrenalin chloride and gelatin were both tried, but failed to stop the bleeding. Operation was urged but refused. The autopsy showed an ulcer 3½ by 2⅛ inches, situated on the posterior wall of the stomach, extending to but not involving the pylorus, consequently there was no dilatation of the stomach. The base of the ulcer was formed by the pancreas, to which the stomach was firmly adherent, and this accounted for the pain in the left hypochondriac region. The point from which the bleeding took place can be distinctly seen in the cut accompanying the article.

Skin-grafting in the Late Treatment of Severe Burns.

A. Young (*British Medical Journal,* Jan. 20, 1906), having in the treatment of large granulating surfaces resulting from severe burns failed to obtain satisfactory results from Thiersch's method of skin-grafting, has practiced with good results a modification of Wolfe's or Krause's method, in which the whole thickness of the skin is transplanted. The modifications devised by the author relate to (1) the cutting and preparation of the graft and the closure of the fresh wound made in the process; (2) the preparation of the granulating surface to be covered;

and (3) the dressing of the grafted surface at the time of the operation and subsequently. The transplanted flap is detached directly from the fascial covering of the muscles, and thus consists of skin and all the underlying fat. After preparation of the granulating surface and closure of the fresh wound, the flap of skin and fat, immersed during the interval in warm saline solution, is laid on the palm of the hand with the epidermic surface downward, and all fat quickly but carefully cut away by means of scissors curved on the flat. The flap should by preference be applied directly to the surface of undisturbed granulation tissue, care having been taken to render this surface quite healthy by removal of sloughs and exuberant granulations, and by thorough cleansing with antiseptic solutions. After the application of one or more grafts the whole surface is covered by a large sheet of perforated oiled silk or wide-meshed muslin or gauze soaked in sterile saline solution or boracic lotion, and over this are placed several layers of aseptic gauze soaked in the same solution, the whole being secured and kept moist by a large sheet of gutta-percha tissue, and a copious swathing of cotton-wool. The author attaches much importance to the detail of a daily dressing from the very outset of the postoperative treatment.

Acute Edema of the Lungs Secondary to Ether Narcosis.

V. C. Pedersen (*Annals of Surgery*, January, 1906) after narrating sixteen cases draws the following conclusions: (1) The quantity of ether varied between one and six ounces. Haste in administration is more objectionable than quantity. (2) The bag or regulable inhaler was used, this being the safest and best. (3) Manner of administration and other circumstances in the management of narcosis and convalescence are the etiological factors. (4) The nature of the operation is not of so much moment as the conditions of temperature and ventilation. (5) The limits of life in the sixteen cases after operation were one and a third hours and thirty-three hours. (6) Age and sex are unimportant as data. (7) Previous good health was noted in three cases. (8) Some of the lesions found at autopsy involved heart, kidneys, lungs, abdominal viscera, and brain. (9) Edema of the lungs was found during life in eleven cases, and after death in five. (10) Treatment consisted of venesection, dry cupping, cardiac and respiratory stimulation, artificial respiration, and elevation of the foot of the bed.

MEDICINE.

Cylindruria.

C. P. Emerson (*Journal of the American Medical Association*, Jan. 6, 1906) gives the results of an exhaustive study of the subject of urinary casts, based on the investigation of the records of all the cases of nephritis and those resembling nephritis, that have been admitted to the medical wards of the Johns Hopkins Hospital, about 500 of which came to autopsy. The classification and formation of these casts are discussed in detail, and the study includes not only the casts, but also the accompanying conditions, the various forms of nephritis and kidney degeneration, acute and chronic, etc., as well as the non-nephritic conditions in which casts may occur. He says that casts appear wherever albumin might or does occur, but one may be present without the other. It is safe to say that it is the cells that are at fault. The lesion causing cylindruria may be very slight and temporary, some slight disorder of circulation or malnutrition of cells, as renal cells are among the most sensitive in the body. They may be a good index of the present condition of the cell, whether just irritated or totally destroyed, but they give no clue to the underlying conditions. It would seem indeed that the cells of a normal kidney could give a more lively demonstration of their disturbed condition by a vigorous output of casts than could those of a diseased kidney. The latter seems to be able to become accustomed to its condition and give out no casts.

While casts and albumin do not always run roughly parallel, the former are of much importance in following a case of renal disease. Their merely temporary appearance, no matter how alarming in number and variety, means a transient and probably not serious disturbance; their continuance for days, weeks, or months, no matter how few, means chronic nephritis, and for them to remain two years means an incurable case. In nephritis a diminishing number, including fine granular and hyaline casts, means a subsidence of the acute process, while the reappearance of the coarsely granular, epithelial, and bloody casts means a flare-up. That they precede albumin in certain early cases of nephritis remains to be proved. In scarlet fever the casts may outlast the albumin, which ceases with the temperature, but in some cases there seems to be only cylindruria from the first, and this ceases with the fever. In typhoid, pure cylindruria is not

uncommon, and when albumin occurs, casts may become more numerous after its disappearance. Phosphorus poisoning may produce only casts, and these abundant epithelial, with the cells at all stages of fatty degeneration, and fatty casts. Casts also occur in various acute infections, in the cancerous cachexia, in diseases of the central nervous system, in various lung diseases, as severe bronchitis and pneumonia, and in empyema.

In conclusion Emerson emphasizes the fact that the casts alone are no index to the anatomic renal condition. They are often most marked in non-nephritic conditions, and in the most serious disorders they may be lacking. The more normal the cells the more readily do they form casts when disturbed; in chronic conditions there may be few or none. The duration of their occurrence is important, and a case may be well followed by the casts. Epithelial, pus, and blood casts are more common and of less significance than is generally supposed.

Examination of Stomach Contents.

Twenty years have passed since Ewald enriched medicine by introducing his "trial breakfast," and in spite of many other methods of gauging the digestive capabilities of the stomach, some of which preceded Ewald and others succeeded his publication, none are capable of demonstrating it as well as this method. Boas (*British Medical Journal,* Jan. 6, 1906) finds that in spite of the simplicity of the method and the practical usefulness, many practitioners have introduced various modifications which lead to error.

The original details were as follows: The patient should receive into an empty stomach one roll of white bread of about 35 grammes weight, and 400 grammes of water, or about 400 grammes of tea without milk or sugar, and after one hour the contents of the organ are regained by the tube and examined. In many publications considerable variations, both as to the quantity of the bread and fluid, and also as to the times after which the breakfast is to be regained, are given under the misnomer of Ewald's breakfast. First, he deals with the importance of an empty stomach. This does not mean only during fasting, but the actual absence of all remains of food must be determined. In estimating the quantity of total acidity, it is obviously impossible if remainders of yesterday's meal are in the organ, since one has no idea of their chemical composition. Even for the measuring of free hydrochloric acid emptiness of the stomach is important.

It is therefore necessary to pass the stomach-tube before the breakfast to control this point. The importance of prescribing an exact quantity of the constitutents of the meal, in estimating the quantity of acid, is clear without further explanation. The time during which the food is left in the stomach to digest is of utmost importance if one wishes to derive useful results.

It is scarcely necessary to point out that the breakfast must be given in the morning, and not during the course of the day, but some clinicians appear to be in the habit of even making this error. Turning to an error which is of considerable importance, he says that in certain individuals the secreted hydrochloric acid varies within wide limits, and at times a trial breakfast may bring to light a very high value. In order to avoid drawing conclusions from such a variation, Ewald has insisted that unless the result of the test leads to a typical conclusion, it is necessary to repeat it before making a diagnosis. In order to ascertain clearly the condition of the stomach he finds it wise to test the evacuation not only for HCl and lactic acid, but also for the presence of peptic and rennet ferment. This estimation should be carried out quantitatively. But when the gastric contents include blood, bile, mucus, or saliva, the quantitative analysis for acid is not reliable. Only when positive results as far as HCl is concerned are obtained may deductions be made in this case. Lastly, he deals briefly with the question of the increase of the gastric juice in the cases of disturbances of the motor function of the organ.

Occurrence of Bacteria in the Normal Adult Intestine.

H. A. Houghton (*Medical Record*, Dec. 30, 1905) says that while the presence of bacteria in the intestine is not essential, any bacterial content from complete negation to saturation may be considered normal when the numbers, virulence, and microbic association fall short of overcoming adverse influences provided by nature for preventing the formation of substances detrimental to the welfare of the whole organism. The urine of perfectly healthy individuals should be practically free from ethereal sulphates, assuming of course that their formation is impossible in any other place than the enteric tract, or in any other manner than the one under discussion. The question is complicated, however, by the food, manner of life, etc., of modern man, and the author reviews at length the work of the various observers who have investigated the flora of the human intestine. The

result seems to show that there is a short neutral zone just above the ileocecal valve, where the bacteria are less in numbers than in the cecal region below, and sometimes more, and sometimes less, than in the duodenum and stomach above. From the stomach to this neutral zone the bacterial contents, both absolute and relative, is a varying quantity, depending on a number of factors. At all times the numbers are less than in the cecum or colon. As the ileocecal valve is approached, and this neutral zone is passed, the stream becomes more constant, and in the cecum there is an enormous rise in both the relative and absolute values, both to decline again in the colon. The stomach and the small intestine down as far as the neutral zone just referred to can be made sterile in all probability, and it can be stated with confidence that withholding of food for a few hours, care of the mouth, and antiseptic stomach lavage produce the desired end. Even the most rigorous regimen of starvation, cathartics, and enemata fails, however, to empty the cecum of its germ-laden contents, a fact which suggests a point in the etiology of appendicitis. It must be remembered that enterotoxismus is the price which humanity pays for its artificial environment and urban congestion. In most cases it means some wrong habit of living. In others it seems to mean a diathesis.

Mosquito Work on the Isthmus.

Assistant Surgeon-General W. C. Gorgas gives a history of the mosquito work on the Isthmus (*Journal of the American Medical Association*, Feb. 3, 1906). He first shows the conditions under the French occupation, and how the two diseases, malaria and yellow fever, were responsible for a huge mortality, which is probably not all recorded. He thinks that the French statistics represent really not more than half of the total number of deaths that occurred. There was no policing of the zone. The work was done under contract, and the contractors were charged for all that were sent to the hospital. This is not a criticism of French methods, because circumstances were entirely different from what they are at present, with our better knowledge of the causes and prevention of yellow fever and malaria. With the precaution of screening patients no one fears contracting yellow fever from other cases. Each new patient is put in a wire cage, just large enough to cover his bed, and kept there until the infectious stage of the disease is passed. Besides using every method

of keeping mosquitoes out of the wards, these are fumigated every two weeks, which is sufficient, with the known period of incubation of the mosquito, to catch all of them before they have time to do harm. Houses in which cases originate are fumigated, as also the adjoining ones, sulphur being usually employed. If the patient elects to be treated at home his room is screened and guarded and the rest of the house fumigated, his room being again fumigated after the termination of the case. The campaign against the breeding places of the stegomyia has been efficient, so that 90 per cent of their breeding places had been destroyed in the city of Panama between March and October of last year. The conditions were very different from those in Havana, fully 90 per cent of the Panama mosquitoes being stegomyia, against 5 per cent in Havana, and the territory covered being very much larger. The practical result, however, has been the same in the stamping out of yellow fever. Malaria, however, is the principal difficulty, but here the results have also been favorable, the principal recourse being superficial ditching. Out of 22,000 employees in October last there were only 21 per 1000 on the sick list, and he thinks the health conditions are fully as favorable as they would be in similar work in Maryland or in Pennsylvania.

Studies of the Toxicity of Bile.

S. J. Meltzer and William Salant (*Journal of Experimental Medicine,* January, 1906) say that contrary to the prevailing opinion, bile contains a tetanic element or an agent which causes increase of excitability of the nervous system.

Bile from the common duct of many rabbits causes marked hyperesthesia and tetanic attacks when injected into frogs.

Stagnant bile (as in the gall-bladder, etc.) invariably produces coma and paralysis.

The depressive and exciting elements of the bile are mutual antagonists, the total effect of both, when simultaneously present, being that of an algebraic sum.

The depressive element when present in a highly effective dose is by far the stronger of the two; while, on the other hand, the tetanic element becomes effective apparently in a dose far below that which constitutes the minimum for the depressive element.

Owing to these peculiar characteristics of the two antagonistic toxic elements, the mixture of both within the bile can be

so adjusted as to produce any of the many possible degrees of irritability lying within the range of tetanus at one end and paralysis at the other, and including a neutral state presenting apparently a normal or tranquil condition.

Bile salts seem to contain the tetanic element in a distinctly less amount than the whole bile.

Nephrectomy increases the toxicity of bile in the direction of excitation.

The effect of nephrectomy can be imitated by subcutaneous injections of strychnine.

The bile of nephrectomized rabbits which received strychnine produces hyperesthesia and convulsions more readily than any other bile.

By injecting a toxic dose of strychnine into a frog soon after it has received a distinctly depressing dose of bile, an "eclamptic" state can in some cases be produced.

Typhoid Fever.

J. F. Jenkins (*Journal of the American Medical Association*, Dec. 23, 1905) insists on the recumbent position from the beginning in typhoid fever. He states that milk, preferably given with pepsin and hydrochloric acid, and two soft-boiled eggs every twenty-four hours, occasionally alternating with barley or rice for a change, make a very efficient diet during the whole course of the fever. In the later stages a little old whisky, as a stimulant to a flagging pulse, may be added to the milk. In the early stages fractional doses of calomel, followed by a small dose of Rochelle salts or sodium phosphate, are indicated; in some cases they may be repeated from time to time during the first and second weeks. Intestinal antiseptics are of value, he states, in checking putrefaction and relieving diarrhea and tympanites, and therefore should be prescribed. When the temperature rises to 102.5° cold sponging or tubbing should be resorted to, and it is advisable to follow up the bath by vigorous frictions. Frequently a small amount of stimulant is indicated after the bath. When there is delirium or coma the ice-bag to the head will relieve and often induce a natural sleep. During convalescence a tepid sponge bath of alcohol and water, equal parts, he thinks has a beneficial effect. One should insist on the patient taking from a quart to a quart and a half of boiled water every twenty-four hours, as the typhoid patient does not

usually demand water, even when the temperature is high. Diarrhea when excessive is often checked by reduction or change of diet, and full doses of bismuth subnitrate will usually be effective. For restlessness in the late stages Jenkins has found Hoffmann's anodyne a very useful remedy. In the later stage stimulants are required for supporting the feeble heart action, and during convalescence he advises hexamethylenamin in 5-grain doses, three times a day, to destroy the bacilli in the urine.

What is the Relation Between Human and Bovine Tuberculosis?

Theobald Smith (*Boston Medical and Surgical Journal,* Jan. 18, 1906) says that there are two types of mammalian tubercle bacilli, a bovine and a human type, and that the bovine type is occasionally present in human tuberculosis. How often the invasion of the human subject with bovine bacilli takes place cannot be stated with any degree of accuracy, but it is interesting to note that in Japan, where milk does not play any appreciable rôle in the feeding of infants and children, human tuberculosis, including the intestinal diseases, is as common as in older countries. Phthisis and the other forms of tuberculosis in adults are, so far as we know, almost wholly of human origin, and the bovine bacillus has been found almost exclusively in children under the age of ten years. At present no absolute opinion can be given.

Immunization in Tuberculosis.

Karl von Ruck (*Medical Record,* Jan. 20, 1906) calls attention to the various methods employed to obtain a purer toxin than was present in Koch's preparation of tuberculin, particularly referring to the experiments of von Behring, who claims to have discovered a method of immunization which is certain, rapid, and free from danger. He states that the immunizing curative substance of the tubercle bacilli is contained in their bodies, and this substance he calls "T. C." Von Ruck gives clinical results and observations from his own preparation. Taking cases in the early stages of tuberculosis and phthisis, he shows a recovery in one hundred and sixty-one out of one hundred and seventy-one cases, or 95.5 per cent. Ten patients left the institution satisfied with the results, or continued the treatment at home. Cases further advanced showed a recovery of two-thirds, or 66.3 per

cent, with a 27 per cent result from those in a critical stage of the disease, a condition which would not be obtainable for the most favorable class of tuberculous patients without immunization. Von Ruck emphasizes the fact that the first credit must ever belong to Koch, its real discoverer, but that von Behring's method should be given an impartial trial. In the event of von Behring being disinclined to supply the preparation, von Ruck offers to place at the command of those wishing to experiment the necessary quantity of tubercle bacilli extracted and prepared according to von Behring's published method, and in a state reached in his own preparation prior to the final extraction with distilled water.

Deception and Falsehood as Pathological Phenomena.

Alfred Gordon (*American Medicine*, Jan. 13, 1906) shows the fundamental difference between a falsehood observed in normal life and that of an individual whose mental make-up cannot be considered normal. He points out the tendency to exaggeration and misrepresentation of facts in children, in whom this phenomenon can be practically considered as the result of a normal vivid imagination. In adults the condition is altogether different. He cites a number of examples in which this pathologic tendency was developed to its highest degree. Summarizing all the data recorded in the literature and his own, he arrives at the conclusion that under certain circumstances these morbid phenomena should be considered as stigmata of degeneracy.

Facts About Eating.

John W. Achorn (*American Medicine*, Feb. 17, 1906) says that where a sick-headache (mixed migraine), biliousness, hyperacidity, duodenal ulcer, spastic constipation, chronic rheumatism, bronchitis, asthma, postnasal catarrh, eczema, acne, pruritus (itching), neuralgia, insomnia, cerebral hemorrhage (apoplexy), arteriosclerosis (hardening of the arteries), Rigg's disease (loose teeth with retracted gums), frequent urination, physical weariness (that tired feeling), obesity in some of its forms, and many other ailments and conditions are present there is or has been overeating of some sort, too much eating of one kind of food, meals are taken too near together, there is "nibbling" between meals, the food taken is not being properly insalivated, it is being washed down by liquids in excess taken with

it, or after meals independently of the food ingested. The question is not so much one of individual foods as it is one of control in habits of eating, and of restriction of food to the actual physiologic needs of the system. If diseases are to be cured or unorganized exudates absorbed, the restriction must be carried to the point where the system lives for a time and in part, at least, on the waste locked in its tissues and carried in the blood. This is simply a matter of "cleaning house," and the food, like the sail of a boat, must be trimmed flat enough to allow the body to weather the conditions present. Starches and sugars are the foods that common experience has shown are the most likely to clog the system. Meats or other foods require to be controlled, depending on the indications.

Uric Acid Excretion in Leukemia.

Rosenberger (*Münchener med. Wochenschrift,* xl, 1906) states that in the treatment of leukemia with the *x*-rays the excretion has not been previously observed. If the uric acid decreases during treatment the prognosis is favorable; if, on the other hand, it increases the patient is getting worse. The excretion of the xanthin bases increases both after and during the *x*-ray treatment. In the treatment of pseudoleukemia and splenic anemia the uric excretion is unaffected.

Typhoid Bacilli in the Blood.

Conradi (*Deutsche med. Woch.,* 1, 1906) believes the reason that the bacteria are so difficult to find in the blood is because the serum possesses a strong bacteriolytic power which destroys the organism. The writer took blood from the lobe of the ear of patients into a 10-per-cent peptone and a 10-per-cent glycerin solution of beef bile, and by this method demonstrated the bacilli eight times during the first week of sickness, and five times before a serum reaction or an examination of the excretions was positive.

Rabies in Rats and Mice.

Calli-Valerio (*Centralbl. für Bakteriologie,* Bd. xl, H. 3) demonstrated that certain species of rats and mice must be considered in the distribution of rabies—in fact they are capable of greatly increasing the virulence of this disease. The bite of a

rat should be considered dangerous, because the rabid animal shows a very aggressive disposition. By intracerebral injections of rats with street virus three inoculations will produce a material of maximum virulence, whilst it requires fifty inoculations in rabbits to produce a virus of similar strength. In rats foreign bodies are not found in the stomach, though a hyperemia of the central nervous system and Negri bodies may be demonstrated.

Phagocytosis and Seroactivity.

Gruber and Futaki (*Münchener med. Wochenschrift,* xli, 1906) find that if virulent typhoid bacilli are injected into guinea-pigs they are not attacked by the leucocytes, unless they have previously been acted on by the alexins. The serum reaction varies greatly with other species of bacteria, whether it had previously been sensitized or not. The primary protecting agent is not phagocytosis, but the thermolabile substances, the former being secondary. If on the injection of bacteria into the body phagocytosis immediately takes place, the alexins must already be present and the blood bactericidal.

THERAPEUTICS.

Strychnine and Nitroglycerin in Circulatory Disorders.

O. H. Brown (*Journal of the American Medical Association,* Jan. 13, 1906) notices the mistake that is sometimes made in the use of these remedies in cases of circulatory disorder. He describes the mechanism of blood-pressure, both in the general circulation and in the heart. Strychnine acting on the vasomotor center constricts the arterioles, causing a rise of blood-pressure and a better coronary circulation, a better nutrition of the heart, and a more efficient systole. Only exceptionally does it so stimulate the inhibitory vagus center as to produce no rise of arterial tension. Nitroglycerin on the other hand, he states, dilates the arterioles, lowering blood-pressure and aiding the heart by reducing the resistance against which it works. The two drugs are directly opposed to each other in their action on the circulation, and when one is indicated for its therapeutic effects the other is contraindicated. Strychnine is called for when there is a low blood-pressure, a rapid heart, and bounding and easily compressible pulse; nitroglycerin is indicated when the arterial tension

is high, the heart-rate slow, the pulse full and tense, and the wave very slight. In case of muscular degeneration of the musculature of the heart the signs might be slightly different from the above.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
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Eyes and Ears that Might Be Saved.

S. S. Waltham (*Medical Record,* Jan. 6, 1906) says that patients suffering from atrophy of the optic nerve or loss of the special senses should be under the care of the general practitioner, because the subjects are, with few exceptions, the victims of some form of dyscrasia. This may be from accident, from constitutional or specific infection, or from one or more bad hygienic habits. Nearly all of them are badly nourished, usually in the sense of being injudiciously fed. The general practitioner can temporarily ignore the local trouble and investigate the general and special condition of the patient's entire organism. The author discourages the use of mydriatics or repeated ophthalmoscopic examinations once the diagnosis is made. The proper dietary is described at length. The food should be rich in phosphates and should contain much refuse. The husk of the grains, especially of wheat, fulfils both requirements. Drinking large amounts of distilled water is also recommended. Turkish baths, especially with the electric cabinet instead of the ordinary hot room, are useful, and alcohol and narcotics must be prohibited. Drugs are of little use; the iodides are usually disappointing, but cataphoresis and external applications may be used with more assurance. To arouse the dormant, debilitated nerve the violet ray, high-frequency current, and mechanical vibration are of service, but their use requires careful analysis of each case.

Tinnitus Aurium.

First reporting a case in which operation was contemplated, but not carried out on account of the improvement of the patient, W. B. Bryant (*Journal of the American Medical Association,* Dec. 9, 1905) discusses the propriety of dividing or destroying

the auditory nerve trunk for the relief of specially severe cases of tinnitus when it can be determined that this nerve is the seat of the disturbance. He describes a method of procedure suggested by Dr. Carlton Flynt, which he has followed a number of times on the cadaver, and which he considers has certain special advantages; he also reviews the reported cases, reproducing some of them in rather considerable detail. He has reached the following conclusions: (1) Carefully selected cases of tinnitus, with nerve stimulus located in the peripheral end of the auditory nerve, offered a good prognosis for cessation of the tinnitus after the section of the eighth nerve. (2) A technique which offers little inconvenience from hemorrhage, no danger from bony spicules, and a minimum of evil from compression of the cerebrum, or especially of the cerebellum, gives a good prognosis of recovery from the operation, and in selected cases a cessation of the tinnitus. (3) If, after appropriate general and local treatment, grave tinnitus still exists, we are called on to recommend the section of the auditory nerve, provided the source of the tinnitus is believed to lie in the peripheral portion of the auditory nerve. (4) Section of the acoustic nerve will be as effective for the cure of aural vertigo as for peripheral tinnitus.

GYNECOLOGY AND OBSTETRICS.

Differential Diagnosis of Ectopic Gestation.

Brooks H. Wells (*Medical Record*, Nov. 25, 1905) first reviews the history of modern conceptions of this condition, which was but little understood until Parry's classical monograph appeared in 1867. He then discusses the differential diagnosis, adopting the following classifications of the various forms of extra-uterine pregnancy: (1) Early unruptured; (2) early, with rupture and free hemorrhage; (3) early, with rupture and extra-peritoneal bleeding and hematocele; (4) advanced, with living child; (5) near or after term, child dead. Under the first heading, abortion, ante- or retroflexion of the gravid uterus, pyosalpinx, hydrosalpinx, ovarian cyst, and ovarian or tubal new growths must be excluded. The second group must be differentiated from attempted abortion, acute gonorrheal endometritis, rupture of a rudimentary horn of a bicornate uterus, rupture or perforation of stomach, appendix, or other abdominal viscus, and tumors of the ovary or tube with twisted pedicle. In considering cases of

the third class, hematocele, pelvic inflammation and abscess, cornual pregnancy, and malignant disease of the tube or broad ligament must be eliminated. Cases of the fourth type may be tuboabdominal or tuboligamentary or subperitoneal, and must be distinguished from normal pregnancy with a thin-walled uterus or pregnancy in a rudimentary horn. Diagnosis of the fifth class is often difficult in the posterior ligamentary form when several months have elapsed since the death of the fetus, and malignant ovarian tumor, tuberculous peritonitis, and fibrocyst of the uterus must be ruled out. The differential aids in each category are described and their practical application is pointed out.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
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Psychoses of the Acute Infections.

Regis, in *Archives de Neurologie*, regards these psychoses as not only resembling all the toxic psychoses of the great group to which they belong, but as being practically identical with them.

As to the time of their conception, they may appear before any other symptom, at the height of the febrile stage, at the time of defervescence, or, finally, during some period of convalescence.

The clinical type of all of these psychoses is mental confusion. As to the pathologic lesions, there are as a rule those of general paresis—*i. e.*, those of a diffuse meningoencephalitis. These consist of an edematous condition of the brain, an active increase in vascularity, and changes in different degrees in the neuron bodies and neuraxons, with a proliferation of neuroglia. To these may be added occasional lesions of the heart, liver, and kidneys.

Diagnosis is perhaps most difficult in those cases which appear before all other symptoms, when more common varieties of insanity are most apt to be diagnosed, especially, *e. g.*, attacks of mania. A regrettable diagnosis is that of mistaking for mania a delirium antecedent to typhoid fever. There are signs which may arouse suspicion of a prefebrile psychosis and so permit temporizing. These are premonitory headaches, changes in the urine, obstinate constipation, appearance of fever, suddenness of the delirium, its hallucinatory character, the confusion present, and

its acuteness. An error frequently committed is in mistaking these infections for an alcoholic delirium.

As to prognosis, these acute infectious psychoses commonly end in recovery, excepting the acute meningitic delirium, which is often fatal. Cure, however, is not always complete, and some psychic damage is sometimes seen, particularly in the impaired memory.

As to treatment, this must be antiseptic, general or local, and, of course, such as best combats the infection present. Among special indications, the most important is to secure sleep so deep and prolonged that the delirious and hallucinatory fancies may be held in abeyance. To this end, choral, the bromides, and especially veronal, are very helpful.

In greater detail the author then takes up the psychoses of influenza, pneumonia, etc.

Multiform Tic.

To the Boston Society of Psychiatry and Neurology, Morton Prince (*Journal of Nervous and Mental Diseases,* January, 1906) presented a most interesting case of multiform tic, including automatic speech and purposive movements. Some of the tics present in the case were ordinary choreiform movements of the eyelids, face, and arms, and other complex purposive movements of different kinds. The most unusual is the automatic speech, which is interpolated in every sentence he utters. When this developed there were at first spasmodic movements of the larynx, resulting in meaningless sounds. Then an articulate sound, "chut," was produced; later other sounds, almost always of a profane or obscene nature. "Christ, no," "Hell," "Hell nigger," etc., are among the choice explosions which are interjected, in spite of his efforts at control. Indeed, if in the presence of ladies or strangers he makes special efforts at control, the undesired words are all the more in evidence. The emotional seems to be an active factor here, and in spite of the profane and obscene words used he is a man much mortified by their occurrence in his speech.

These tics belong to a class of motor automatisms, and it was here discovered that certain sensory automatisms could also be induced.

When alone he is never afflicted by his automatic speech unless some one is within hearing distance.

These tics occur not only involuntarily, but when the patient is making every effort to control them.

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ORIGINAL CONTRIBUTIONS.

THE RATIONAL TREATMENT OF URETHRITIS.[1]

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The time-honored adage of Ricord, "Tout le mond connait quand la blennorrhagie commence, mais Dieu seul sait quand elle finera," does not hold good to-day in the face of the more thorough and rational methods of treatment inaugurated during the last two or three decades. The failure to bring a case of urethritis, it matters not whether it be acute or chronic, to a favorable issue is but a tacit indication of our lack of knowledge of both the etiology and pathology of this affection. Were the latter better understood and the routine treatment of this malady abandoned for a more scientific one, there would be but few patients to complain and less of the profession to feel humiliated. A proper comprehension of the etiology and morbid anatomy of the subject under consideration affords the most necessary prerequisites to the intelligent treatment of this disease. With this view in mind the author has appended below a classification of the etiological factors instrumental in the production of urethritis. It would be absurd to regard every case of a urethral discharge as specific or as having been propagated solely by sexual means. There are numerous other etiologic factors far from the sexual sphere that may cause it. The causative agencies may be divided as follows:

1. *Specific or microbic.* This constitutes such elements as the gonococci, or the infection due to other pus-cocci, the latter being capable of not only engendering a very virulent and at

[1]Read before the Wayne County Medical Society, Feb. 26, 1906.

times extremely chronic case, but may also be accompanied and followed by just as many and just as severe complications and sequelæ respectively, as are met with in the course of the ordinary gonococcic form. Chancroidal pus may likewise give rise to a urethral discharge of greater or less severity. Similar effects are occasioned by the virus of syphilis, ushering in a condition of affairs at first simulating urethritis, until the definite character of the disorder is recognized later at the advent of the secondary phenomena of lues. Infection by the tubercle bacilli is another potent factor not to be overlooked. Furthermore, inoculation with sundry other microörganisms invading the vaginal canal, as for example the bacillus coli communis, etc., may similarly be productive of urethral inflammation in the male.

2. *Non-specific or non-gonococcic urethritis* comprises those forms of this affection whose causes bear no intrinsic specific qualities, but notwithstanding which are known to cause urethritis. Thus the trichomonas vaginalis, occasionally inhabiting the normal vagina, may be credited with its production. Then, again, irritating discharges from the cervix and the uterine cavity and the acridity of the mucous secretion preceding the menstrual flow or following it, as well as the menstrual blood *per se*, are etiologic factors of import. The non-specific form may also originate in the course or follow certain of the specific febrile diseases, as typhoid fever, pneumonia, catarrhal fever, epidemic parotiditis, etc.

3. *Mechanic.* Overindulgence in venery is also apt to create urethral irritation; this is often observed in newly married men, especially so when there is an intact hymen, and the male has been leading a chaste life prior to matrimony. Urethritis may also be caused by the action of divers mechanical factors upon the urethral mucosa, as for instance the passage of calculi or the introduction of foreign bodies into the canal. Catheterization or the insertion of the different urethral instruments for diagnostic or therapeutic purposes not infrequently occasions urethral inflammation.

4. *Diathetic or Systemic.* To this category belong those attacks of the disease making their appearance during the existence of some nutritional or metabolic defect. Thus the lithemic state is not rarely accompanied by urethritis. The same may be said of acute inflammatory rheumatism. Diabetes mellitus is known to be provocative of urethritis in a number of authentic cases on record in literature. Phosphaturia, or the so-called

"phosphatic state," is similarly charged with its causation. Locomotor ataxia alone may give rise to urethral inflammation of varying degrees of intensity during the "vesical crisis" of the former. We must also take in consideration urethritis due to the syphilitic poison appearing during the late secondary and tertiary periods. Acute debauchery or indulgence in the pleasures of the table likewise bears at times the brunt of responsibility in the causation of this malady. Debility traceable to many causes and cachexia incident to malignancy are also weighty factors. We should never forget that we have a patient to treat and not merely a diseased urethra. This circumstance must not be lost sight of by the practitioner.

5. *Consecutive or secondary.* This caption embraces that form of urethritis the result of too active treatment, or rather overtreatment. Cases are sometimes too energetically handled, and in lieu of improvement the reverse is quite often the case. An unresponsive, flaccid, and catarrhal state of the urethra is brought about, which will show no tendency to abate, save upon the recognition of the cause and the subsequent suspension of all remedial intervention. To the same class also belong those cases that are evoked by some morbid condition of the urethral appendages. A cowperitis, seminal vesiculitis, prostatitis, or prostatic enlargement may be at the bottom of the discharge, which conditions, when remaining untreated, will prolong it indefinitely. Chronic inflammation affecting the large urethral follicles, especially those situated in the fossa navicularis, is a fact not to be underestimated; the urethra itself in these particular cases remaining free from any vestiges of involvement and harboring no microörganism of any form.

As regards the *prognosis,* it must be remarked that authors and the consensus of opinion of the profession at large are unfortunately too arbitrary, and hence the prognosis has been more or less influenced by this fact. *Urethritis is by no means a self-limited disease.* A prognosis must be rendered more guardedly and should be based upon the particular etiologic factor that generated it, as well as upon the treatment employed, which, it must be confessed, is far from being rational at the present juncture, savoring of empiricism and a very ludicrous routine.

The *treatment* will now engage our attention. That it depends upon the causative factors is obvious. The non-specific form demands an entirely different régime than the specific variety. We must endeavor in all cases to eliminate the cause,

so far as it is possible. To dwell at length upon the treatment of the various types of the malady under discussion is a scope that would require more time and space than has been allotted to the author. Suffice it to state, however, that urethritis dependent upon certain dyscrasiæ and diatheses must receive adequate consideration before we can expect favorable results. To treat any given case of urethritis merely with a hand injection and the internal exhibition of some nondescript "urinary antiseptic," without having recourse to physical, urinary, and microscopic examination, if it be necessary, is just as absurd as to treat the symptoms of a febrile disorder without taking cognizance of the specific elements which may have precipitated the fever.

Of greater interest to the physician is, however, the treatment of the gonococcic type of the disease. Concerning the so-called "abortive plan," the author has nothing good to say of it. It is an inappropriate procedure and should be disapproved of and condemned by every scientific physician. To destroy the gonococci would necessitate the use of powerful germicidal agents—agents that will undoubtedly embarrass the intact urethral mucosa, and may thus be conducive not only to increased suffering but to appreciable solutions of continuity therein, damage the canal permanently, and eventuate into stricture formation subsequently. Its irrationality is apparent at a glance and need not be dilated on. The conservative school of the profession advocates the "expectant plan" of treatment, contending that a gonococcic urethritis is a self-limited affection uninfluenced by interference of any kind. This is a very reprehensible conception of the real pathology of the malady, is far from scientific, and may at times lead to unfavorable sequelæ, and not infrequently prolong the duration of the disease indefinitely. This plan is of doubtful propriety, and deserves to be ignored as an irrational mode of treatment. Not less reprehensible and still more ridiculous are the remedies in vogue at present, obsolete and obscure methods that have come down to us a heritage of barbarism or witchcraft from the latter part of the medieval past. The author cannot refrain from disparaging their employment, and shall prove the inefficiency of their highly vaunted therapeutic activity. Their name is legion, and to enumerate them all would require a special chapter to be written in the histories of medicine now extant. The writer will mention a few of those in order to refute them. Prominently among them figure the "alkaline diuretics." The theory is pretty much prevalent

that alkalies when ingested are absorbed in the circulation and neutralize normal urine by rendering it alkaline, thus alleviating pain and ardor urinæ, two harassing symptoms of the acute stage of this disease, simultaneously acting as mild urinary antiseptics. This theory contains much that is futile. When alkalies are absorbed, their identity is completely destroyed as far as the acid radicle is concerned; they are ultimately converted into *normal chlorides or salines and not carbonates,* which are known to possess diuretic properties; it is only by the latter virtue that they exercise a beneficial effect upon the inflamed urethra, not, however, *primarily as alkalies, but as diluents and diuretics.* Thus the author's assertion may not conform to established orthodox doctrines or theories pertaining to this particular phase of the physiological action of alkalies, and he therefore anticipates to be rigorously dealt with and relentlessly criticized for it.

The therapeutic value of boric acid and salol, either alone or in combination, which is administered thoughtlessly as a routine measure, with the expectation to disinfect the urethral tract, is likewise to be doubted. The various balsamics, as copaiba, santal oil, gurjun, and the oleoresin of cubeb, must be mentioned in order to be condemned, not alone as nauseating and repugnant substances, but utterly devoid of benefit in this disease. It is unreasonable to believe that a drug ingested and acted upon by the different digestive ferments and fluids found in the gastrointestinal canal, after being absorbed in a modified and chemically altered form, and after being oxidized and in turn converted into simpler products, should act as efficaciously on the urinary passages as *in vitro* in the chemical and bacteriological laboratories. The presumably beneficial effects of these remedies as witnessed in practice are not due to their inherent specific properties, but rather to the intake of large draughts of water proverbially given with these antiblennorrhagics, which acts not merely as a diuretic but also as a detergent and diluent, thus allaying painful urination, mitigating the urinary tenesmus, and indirectly acting as a mild antiseptic by virtue of the saline constituents it usually contains.

The most rational method of treatment of the acute stage of gonococcic urethritis is that of irrigation, as first introduced by Janet in France and extensively used and elaborated in this country by Dr. F. Valentine, of New York. The author has, however, utilized a procedure, which for lack of an adequate terminology he has designated the "modified Valentine treat-

ment," and which he will attempt to outline in the subjoined paragraphs. With this method the average duration of acute urethritis should not exceed three weeks, provided the patient presents himself for treatment within the first three or four days of the beginning of the acute manifestations, and his urethra has not been impaired by the previous existence of the same trouble—that is, *provided the patient had contracted this affection for the first time.* Recurrent attacks of this disease render it less amenable to this form of treatment, and may prove very intractable.

The patient is told to drink plenty of water, and if he be fastidious, he may partake of some of the so-called mineral waters with which the market is teeming, or he may use some of the mildly acidulous drinks abundantly dispensed in confectioneries. All alcoholic and malt beverages must be interdicted, as well as tea and coffee. Condiments of any sort, highly seasoned dishes, and nitrogenous foods must be temporarily avoided. Soups are too stimulating and should be partaken of but sparingly. The anterior urethra is flushed with a normal saline solution by means of the Valentine douche or a similarly devised apparatus with a good valve attachment to regulate the flow. Not more than three pounds pressure should be allowed, or what is the same the apparatus should not be elevated higher than six feet. A soft-rubber catheter encircles loosely the root of the penis, or what is more preferable, the fingers of the left hand of the operator gently press the penis at the root while the right hand manipulates the valve. The latter should be of such construction as to effectively regulate the current, which should be continuous and slow. The slight constriction at the root of the penis prevents the fluid from passing the corresponding portion of the urethra and causes it to be propelled posteriorly, thus averting the possible invasion of the deeper portions of the canal, a feature very undesirable and zealously to be guarded against. The infectious agent during the acute stage is confined to the first two or three inches of the urethra. By allowing a steady stream of normal saline solution to come in contact with the mucosa for about four or five minutes, it not only frees it from detritus and quantities of accumulated purulent material, but lends greater resistance to the cells as well, hence preventing the extension of the process and at the same time acting as a mild disinfectant. This effected, the meatus is dried and 20 minims of a solution of adrenalin (1:1000) is instilled through an ordinary bulb eye-dropper into the canal; the meatus is then compressed, and

the solution kept there for at least five minutes, after which it is permitted to escape. The adrenalin constricts the superficial capillaries and thus removes a prolific source of supply —the pabulum necessary for the multiplication and maintenance of the gonococci, which for want of it readily succumb. Four results are thus achieved with the modified Valentine treatment, viz.:

1. The removal from the urethra of muco-pus, epithelial débris, etc.

2. Astringent action: Constriction of the peripheral vessels and the shutting off of a nutritive supply to the infecting agent.

3. By so doing it acts indirectly as a disinfectant to the urethra.

4. The duration of the affection is decidedly curtailed without endangering the integrity of the urethra.

The effects of the above procedure are very satisfactory, as the discharge is manifestly lessened after a few irrigations, the patient expressing relief from all annoying symptoms. The saline irrigations are continued daily, or what is still better, twice a day, if possible, for ten days, after which period the treatment is changed to potassium permanganate in ascending strength, beginning with 1:10,000 and increasing up to 1:1000 by the end of the third week. It will then be noticed that the discharge has come to a standstill and the urethra has been restored to its normal. If there is still a slight serous secretion at times evident at the meatus, we may resort to a prescription composed of zinc sulphate, adrenalin (1:1000), colorless fluid extract of hydrastis, in a vehicle of distilled water, which in a short time will check it completely. Three weeks suffice in the majority of instances to effect a cure, while in favorable cases it is brought to a final in ten to fourteen days. This time factor alone bespeaks the advantage of the above treatment as compared with that practiced formerly in a loose, haphazard, and empirical manner, when the prognosis as to time was considered to be from six to eight weeks. This method then has the advantage over the older forms of therapy that it in a sense limits or shortens the duration of the affection, as evidenced by a number of cases on the author's record book. Specific or gonococcic urethritis under the aforementioned regimen is therefore a limitable and abortive disease, which regimen does not tend to undermine the integrity of the urethral canal, as is commonly the rule with the caustic remedies in vogue during the last two decades,

and still attempted by some under a mistaken conception of the pathology of this disease.

The treatment of the chronic form is more difficult, tedious, and complicated than the acute variety, and necessitates perseverance and patience on part of both the physician and patient. Various solutions for injection have been advised, among them the vegetable compounds of silver, alone or in combination with ichthyol and adrenalin, either as a hand injection, or what is still better, to be used by the physician himself. We should make it an axiom not to entrust any mechanical or instrumental means, be it ever so simple, to the charge of our patients. An injection fluid which has found favor with the author is a solution of protargol (5 per cent), together with adrenalin chloride and Magendie's solution of morphine—if there be tenderness present—with or without hydrastis (the latter in the form of the colorless fluid extract). This is injected either anteriorly, or in case the process has traveled beyond the triangular ligament—which it invariably does in nearly 75 per cent of cases—through an Ultzmann instillator into the posterior part of the urethra. Silver nitrate, which has been extensively used heretofore, has been discarded for the albuminates or peptonates of the same metal, preferably argyrol or protargol. There are cases, however, in which the nitrate acts more favorably than the before mentioned compounds, and is thus accordingly used in preference to those by the author in selected cases. Irrigations with strong solutions of potassium permanganate are likewise useful, either as a recurrent irrigation by the Valentine apparatus, or as a vesico-urethral irrigation through a catheter, allowing it to escape by the natural route. Zinc sulphate has also been tried and found to be efficacious in those cases in which the urethra is the seat of a catarrhal process, and in which infectious organisms cannot be demonstrated microscopically. Ichthyol and belladonna in conjunction have been employed as a retrojection in the chronic form of urethritis. The insertion of sounds for their stimulating effect on the mucosa offers a therapeutic measure of great value, but it is too laxly used by many, without knowledge of the indications prompting their employment. As a routine procedure it is not to be advised in all cases. That its intelligent use is followed by marked improvement cannot be denied, but as used by some in the unsettled manner already intimated, it must be discouraged. The indications for its use are as follows:

1. In the incipient and formative stages of stricture.

2. In involvement of the posterior urethra without implication of its adnexa.

3. As a powerful stimulant to the urethra in catarrhal conditions affecting its anterior division, where no gonococci are demonstrable.

The cold sound is the best. It must, however, be thoroughly sterilized with boiling water before insertion, and well lubricated to facilitate its passage. The best and most expeditious method of sterilization is to dip the sound in alcohol and immediately ignite it, waiting until it is entirely cooled off. To be effective the sound must be left *in situ* for at least ten if not fifteen minutes. Various ointments, containing minute quantities of ichthyol, silver nitrate, or balsam of Peru, severally or in combination, furnish good lubricants, fulfilling a twofold purpose, viz., as an emollient and slight antiseptic and astringent. Other emollients may be tried if deemed advisable. The cupped sound, whereon some ointment of silver nitrate is deposited, is an efficient method in prostatic urethritis of long standing. Our intention is not solely to disinfect the morbid area, but also to stimulate it, *e.g., to cause a substitutive inflammation as well as to dilate the canal.* In a number of instances this purpose is readily attained. An acute posterior urethritis, or an exacerbation of the same of greater or less severity, is produced. The packing method, recently advanced, must be mentioned in order to emphatically advise against it. Cataphoresis is of doubtful utility, but may be tried. The beneficial results obtained by it are more pronounced in stricture. Massage or centripetal effleurage of the prostate or seminal vesicles per rectum with simultaneous counter-pressure by means of a sound in the prostatic urethra is a valuable means, but if no improvement be noticeable after one week it should be discarded as useless. The most thorough treatment is that afforded by the urethroscope, revealing not only the actual seat of the trouble, but aiding us in the direct application of the medicinal agents to the diseased areas. Of course we must first determine whether the tube is passable—*i.e.,* whether no bars obstruct its introduction in the form of strictures, polypi, diverticulæ, and other organic obstacles. This ascertained, the posterior urethroscope is passed, the battery turned on, and the field viewed through the fenestrated opening. A great deal of practice is required to differentiate normal from pathological conditions of the urethra. The possession of a urethroscope means

but little; to interpret its findings correctly means half of the success gained. It is impossible for the author to enter into an exhaustive study of the different states of the urethra, both normal and abnormal, as seen through the fenestrum. Long practice and a proper recognition of the urethroscopic field are requisite to the correct interpretation of the viewing picture. Self-deception and uncertainty may create havoc and thus frustrate our aim. Treatment per urethroscope is the most rational method of procedure, as applications of diverse nature may be made directly to the diseased parts; all ambiguity of treatment and ignorance of the actual existing conditions are thereby thoroughly eliminated. The ordinary slender wooden applicator serves well in urethroscopic applications. A double object is gained by the use of this instrument, namely: (*a*) a means of diagnosis, and (*b*) a therapeutic auxiliary.

The value of internal treatment in chronic gonococcic urethritis is questionable. Personally the author has no faith in its efficacy, save for the administration of some urinary sedative after instrumentation, as hyoscyamus, belladonna, or urotropin. We can readily dispense with them even if we strive to have our sounds and instruments scrupulously clean and perfectly sterilized, well lubricated, and gently and slowly introduced. No force except that of a gentle sliding movement must be used. In patulous canals the sound finds its own way, without much effort on our part.

Treatment also largely depends upon the exact seat of the lesion, which must in every case be first determined. The urine must be examined by the three-glass test, to ascertain the probable location of the morbid process; the sound will detect strictured places or diverticulæ, which are by no means so rare as some authorities would suppose. If a stricture is present, its exact site must be made known by the olivary bougie or the bougie à boule. Rectal examination is not only advisable in some cases, but imperative in *nearly all cases of chronic urethritis* that come under the physician's observation. Any anomalies of the prostate or seminal vesicles are readily imparted to the examining finger. Inflammatory states of these structures will not infrequently give rise to urethrorrhea, which is often mistaken for gleet, and unsuccessfully treated for this very vague affection. A search must also be instituted for the possible presence of diseased states of Cowper's glands, as they are equally apt to cause an obstinate urethrorrhea. There is a

form of the latter condition that must not be omitted, entitled lacunar urethrorrhea, on account of its being located in the first inch of the urethra—the lacuna magna, on the roof of the fossa navicularis, where instruments are not rarely engaged. Again, within the first two inches of the urethra the follicles at its base are more prominent than at other portions of the canal. Folliculitis of the urethral mucosa in its course may induce a mucopurulent discharge. Its exact location must first be discovered prior to the adoption of treatment. A tight meatus is frequently a contributing factor which must not be overlooked during a urethral examination; the same holds good of a tight prepuce. In the former a meatotomy is indicated before we are enabled to resort to direct medicinal applications or mechanical interference; in the latter we have recourse to a circumcision. Affections of the bladder, the ureters, and pelvis of the kidney, or of the kidney itself, must attract our attention as possible causes in all ultra-chronic cases in which no palpable cause can be elicited in the urethra and its appendages. Cystoscopy, and if necessary ureteral catheterization, should be performed before definitely arriving at a diagnosis. The possibility of tuberculosis should never be lost sight of. Overtreatment is held to be a potent source for the continuance of a urethral discharge, which ultimately disappears upon the discontinuance of injections and instrumentation. Constitutional peculiarities of the individual must also be elicited before beginning treatment, as we are apt to meet with cases that do well on a tonic course of medicine, with very little or no topical treatment. In these patients perverted health plays an important rôle; either malnutrition, digestive derangements, anemia, or other debilitating states may be responsible for the perpetuation of a catarrhal discharge. That these anomalies of the general health must be corrected goes without saying.

In protracted and persistent cases of posterior urethritis, especially when there is a concomitant prostatic involvement, our only and last resource lies in prostatic drainage by means of a perineal section. This measure has of late been warmly recommended by some surgeons, and the results obtained so far are very promising.

In conclusion the author desires to remonstrate against the vague, unscrupulous, and unscientific way of treatment adopted by some practitioners. The routine method displayed must be objected to by every one who is cognizant of the gravity of

gonococcic urethritis. It must not be slighted, for it is a formidable disease, and frequently becomes a menace not alone to the individual afflicted with it, but also a source of danger to those who are sexually brought in contact with him, who may suffer innocently and whose life may be jeopardized, which is indeed very deplorable. It may become constitutional, and attack the serous surfaces of the body, damage the delicate mechanism of the renal structure, and lead to serious after-effects, immediate or remote. The treatment undertaken by the physician must be in conformity with the most modern principles governing it. The author also wishes to austerely censure and rebuke that faction of practitioners who hold themselves aloof and are "too good to treat clap," as they delight to express it. Medicine fortunately recognizes no aristocracy; it knows of no *elite,* creed, or caste. The only patricians are those who by ardent endeavor and indefatigable labor have helped to assuage the pains and heal the ills of suffering humanity, irrespective of whether the disease has been acquired in a moral or immoral sphere, and independently as to whether the causes have gained access through licit or illicit motives.

166 East High Street.

SOME PRACTICAL ETHICAL AND MEDICOLEGAL PROBLEMS OF SPECIALISM.

BY A. L. BENEDICT, A.M., M.D., BUFFALO.

Generally speaking, the ethical and medicolegal regulations of specialized practice are precisely the same as for general practice and require no discussion. If a physician is a gentleman, his instincts will be an almost infallible guide, after some phases of professional life have been pointed out to him. If he is not a gentleman, no codification of rules will enable him to avoid unethical conduct at some time in his career, and the physician who is not ethical is always dangerously near medicolegal complications of an unpleasant nature.

It must be conceded at the outset that specialism exists in opposition to the old rule of ethics that the assumption of any superior degree of skill is contrary to professional policy. True, at the beginning of his specialization the young physician may say, "I claim no greater ability in this specialty than is possessed by any fairly qualified general practitioner. I am a specialist merely because I prefer to treat one line of diseases, or because

I prefer the mode of life to that of general practice, and if you, as a patient, come to me rather than go to some general practitioner, it must be simply as a matter of convenience or personal preference."

But after the lapse of a few years the specialist can no longer say this truthfully. If after pursuing one line of work for some time he is still no more skilful than the average general practitioner, he has either been idle or singularly unfortunate in securing clinical material, or else he is exceptionally stupid. Without defending blatant boasting or immodesty, the average specialist soon reaches the point at which, at least tacitly, he does assume superior skill, and he would be a worthless specimen of he did not. In any conflict between ancient traditions and the practical demands of progress, the latter must take precedence.

How shall the specialist "hold himself out," to use the legal phrase, as a practitioner in a particular line? This question applies to signs, office cards, prescription blanks, letter-heads, directory and telephone and similar lists, etc. There is considerable difference of opinion and practice in these regards, not only among individuals but as regards locality. In theory the writer holds that, in whatever way the general practitioner "holds himself out" as such, by the words "physician and surgeon" or "physician" or by implying general practice by omitting any characterization, in just the same ways should the specialist designate himself as such.

The reasons for this attitude are twofold: First, it is common sense for a man in any kind of business to let the public know what his business is. Without qualification, a physician's sign, card, or name in a physicians' list implies general practice, and if this is not his business he causes loss of time, especially in vital emergencies, and inconveniences the public, and is guilty of the same kind of perversity as a book dealer who should fill up his windows with flowers and make his store look like a florist's. Only in the case of our profession, instead of occasioning a moment's loss of time on either side, serious inconvenience may result to the physician and disaster to the laity, if the case is at all emergent, and it is mainly for emergent cases that the physician's sign has any drawing power. This phase of the case has its possible legal side. Frequently patients who have waited past the ordinary office hours of most physicians for an audience with the specialist, or who have rung his bell at night, thinking him a general practitioner, are indignant at

the loss of time and delay in getting the proper attention. They do not hesitate to declare that the physician who is limiting his practice should make it plain that he is doing so, and while the writer does not recall any suit for damages on this basis, it must be admitted that from the lay standpoint, and perhaps that of courts of law, such a suit has its merits. We are all familiar with the embarrassment caused by the piano-tuner whose dress and satchel suggested a physician. Probably every specialist has had exactly the same experience as the piano-tuner, excepting for the less degree of embarrassment produced. Even from the narrow view-point of the inconvenience, disturbance of routine and hours of sleep, and absolute loss of time to the specialist himself, this matter has its practical importance, particularly when the specialty is of such a nature that the practitioner must expect emergent calls outside his office and at any hour of day and night, so that he cannot dispense with a night-bell or switch off his telephone.

The second reason for advocating the formal announcement of specialization is the check which would be imposed upon fakirs. The writer has known of one instance in which a physician kept two sets of office cards, one of the usual general-practice type, the other announcing his specialty. Ordinarily, the double-barreled specialist is to be regarded unfavorably, although none of us can draw hair-lines, and there are individual conditions, as location in a small town, or the transition period between general and special practice, which render it perfectly justifiable for one to do both general practice and special work. Then, too, there are many conditions which allow some particular man to develop a high degree of specialized skill and experience, and which nevertheless are not sufficiently numerous, or at least are not sufficiently attainable, to allow limitation of practice. Again, there may be cited the instance of a friend of the writer's who has justly earned a high reputation in a certain line of practice, and who, by attainments and preference, is better adapted to general practice. It would obviously be unjust to demand either that such a man should relinquish his general practice or that he should be deprived of the privilege of practicing the specialty in question, as part of his general work. So, too, even in quite well recognized specialties, different men, by virtue of different degrees of mechanical dexterity or inclination to various branches of research, or of local circumstances, construe their limitation of practice in quite dif-

ferent ways. For instance, otology is not a Siamese twin of ophthalmology, and in these branches, as well as in many others, one man is better qualified to treat surgical conditions, another to omit operative work. Yet, in general, the man who essays to be a specialist at all should be morally and, so far as possible, actually bound to limit his practice accordingly. This can obviously best be done by not only allowing but requiring him to announce himself as a specialist whenever a general practitioner would have his name appear simply as a member of the medical profession. It may be added that these views are not original but are quite widely entertained, at least in theory.

It may be explained that the objection to double-barreled specialists is not merely in analogy to the prejudice of "single-line dealers" to department stores, nor one based entirely on ideas of business fairness in the narrow sense. On the contrary, the general coincidence of limitation of practice with specialization is demanded by the best interests of the laity—always most important—of the medical profession generally, of specialists as a class, and of individual patients, general practitioners, and specialists. Always allowing for particular exceptions, which may be reduced almost entirely to three heads—members of the specialist's family and dependents, emergency cases, and trivial complications of a special disease—it is a mistake for a specialist to go outside his specialty. In the first place, when he does so, he is likely to fail to give the patient as good service as could be obtained from a general practitioner or the appropriate specialist. Secondly, it is humanly impossible for the same man to keep himself well posted on his specialty and general medicine, though he should always be well grounded in the latter, both by study and by some years of actual practice, and he should never regard his particular domain as something separate from the rest of the body. Thirdly, if the specialist is at all successful in his legitimate line, every case that he steals from some other branch detracts from his attention to his own legitimate field, and is a waste of time and effort. Fourthly, every departure from limitation of practice by a specialist injures his own prestige as a specialist with the laity and the profession. Even patients who urge him to take a case that does not belong to him cannot but feel that he is not so well qualified to treat that particular case as those to which he is supposed to devote his attention, and even if his ministrations are absolutely unimpeachable, and have been solicited as a personal favor, the least

unfavorable turn or unavoidable delay leads to dissatisfaction and desertion. If the specialist is forced to defend himself against a malpractice suit or to be plaintiff to recover for services, he is hampered by the mere fact of his specialization. Fifthly, every transgression of the limits of any specialty tends to injure specialism in general and to disturb the cordial relations that ordinarily exist between general practitioners and specialists.

As a matter of practice, the announcement of a specialty upon a sign, card, etc., one or all, may be deemed inadvisable for particular reasons. In this as in most other ethical problems, etiquette, which is often arbitrary and subject to local and temporal variations, must decide. One of the writer's acquaintances, well known for his probity and ethical demeanor, announces his specialty and in a foreign language, on account of his neighborhood clientele. The writer, like most other specialists of his acquaintance, has hesitated to carry out his theoretical convictions in practice. Curiously enough, the same rule does not apply to all specialties, though it is difficult to explain why the etiquette should be different. For instance, a medical graduate, practicing dentistry, even if he keeps up membership in medical organizations, would be expected to announce himself, by his sign, as a dentist. Little or no criticism would attach to an oculist or laryngologist doing the same. It would be rather questionable for a surgeon to do so, although until quite recently, and even at present in many communities, the general practitioner has announced himself as both physician and surgeon. The profession would look askance at a genito-urinary specialist who would display the words on his sign.

With regard to cards and prescription blanks, the problem is not quite the same, since, unless these are distributed in a way questionable in itself, they do not come into the hands of the laity until the specialization is already known, or at least until the individual specialist is sought as an attendant. Local etiquette may safely be followed in these particulars. Still, a properly characterized office card is convenient as evidence in case of a demand for services which do not fall within the limits of the particular practice, and also, occasionally, as tangible evidence of good faith for skeptical patients who have had unhappy experiences with double-barreled specialists or with the equally undesirable class of general practitioners who claim to have had exceptional experience with whatever disease the patient may happen to have.

In regard to directory and telephone lists and the like, two radically different conceptions may be held. According to one, the announcement of a specialty in such a list is a direct advertisement of special skill to the public. On the other hand, such lists are used about as dictionaries are, to obtain explicit information as to a given word or name. The chance of reaching the public through such an announcement is almost *nil,* and the definite statement of specialization is just as useful and practically as necessary as the statement of the full name and address. Just before writing this paragraph the writer was called to the telephone by some one seeking a specialist in an entirely different field, but whose name happens to be somewhat similar. Now as a matter of common sense, which is always good ethics, the identification of oneself by a statement of occupation—which is one of the fundamental purposes of all directories excepting those of purely social limitation—is just as rational as identification by full name or residence. Of course, the use of conspicuous type in any directory list is unethical, and, fortunately, tends to defeat its own object, as the intelligent members of the laity readily recognize the fact and argue that "good wine needs no bush."

Stationery also occupies a somewhat different status from that of cards and signs. Excepting for purely business purposes, it is a general rule of good taste that stationery is not to be used for advertising, and that it should have as little printed matter as possible. Obviously, there is a difference between the stationery on which one acknowledges a social invitation or writes a friendly letter and that which is used for typewritten or other business correspondence; still envelopes and letter-heads had better contain nothing but the name and address, or the address alone, if that is sufficient for proper return if missent.

All such matters, insignificant as they are essentially, are yet important as indicating the ethical intentions of the individual and demand careful consideration.

Practically the only other way in which specialists encounter ethical problems different from those of the general practitioner is in regard to particular phases of the general rule respecting "interference." This general rule is that two practitioners shall not attend the same patient at the same time, excepting in formal consultation or in rendering temporary relief in an emergency. The right of a patient to select his attendant is, of course, recognized, and any physician is at liberty to take a case after the

discharge of a former attendant, though even in this event a courteous regard for the claims of the family doctor is at least advisable, especially in neighborhoods in which family practice is maintained in the good old way. The laity, however, appreciate to the full, and even in an exaggerated degree, the merits of specialism, and are apt to divide themselves up in a way that is amusing and that may readily lead to serious consequences from the antagonism or duplication of prescriptions, and which would frequently lead to much bitterness between attendants, if it were not for the general good-will and common sense of the medical profession and their willingness to waive formalities in adjusting conflicts.

When a physician is employed by a stranger for a definite ailment and his attendance is definitely terminated either by the recovery of the patient or by premature discharge, there is no difficulty involved. In the case of the physician who considers himself the family physician of an individual, and who is consulted at irregular intervals by an ambulant patient for a chronic disease or for a succession of minor complaints, there often arise differences of opinion as to when he has been discharged from actual treatment. These differences may be entirely reasonable from the different standpoints of family physician, patient, and specialist, or they may seem unreasonable but evidently held in good faith, or the element of selfish interest and bad faith may be apparent.

It seems a fair rule that a genuine specialist, voluntarily relinquishing his opportunities to obtain a general practice and that hold upon an entire family which attendance upon an individual member affords to a general practitioner, may freely accept any patient who seeks him as a specialist and who is not immediately under the care of another. Yet a patient ignorant of the customs of professional men, or inclined to disregard the feelings of his physicians, may occasion strife, while a selfish or contentious physician, in either general or special practice, may cause unnecessary friction. What seems to the writer a common-sense rule, and one that has worked well in practice, is that a specialist should inquire as to the previous or present attendants of each new patient, and communicate with them before undertaking the examination and treatment if it is apparent that any attendant may reasonably consider himself the family physician, or that joint attendance could cause either professional friction or damage to the patient's interests. An excep-

tion may well be made in the case of patients from out of town, who have, in good faith, sought advice supplemental to that of the regular attendant, though even then the specialist should communicate promptly with the family physician and insist upon reporting to him, as a consultant.

At the same time it must be remembered that some physicians assume the rôle of family doctor upon a surprisingly short acquaintance. Specialists are not alone in encountering such confrères. Even general practitioners whose patients have, for some trivial reason, left them for another sometimes find that the latter has the effrontery to protest against their returning to their established allegiance. Any physician, whether specialist or not, may ethically accept any patient who desires his services, after well considered discharge of a former attendant, even if the latter does protest.

When there is the least tendency on the part of patients and their relatives to misrepresent the true state of affairs, the most unpleasant conflicts may arise. For example, the writer, encountering a case in his proper line, quite by accident, and inquiring as to how long his services were desired, was told that the patient had not had a physician for years. The patient's wife, however, had very definite ideas as to the existence of a family doctor, and stated that the latter had attended her husband for the very complaint now exacerbated. This physician coincided with her views, and very naturally and properly took charge of the case. Indeed, until matters were explained he was very decided in his condemnation of the writer, and if he had not been outspoken the misunderstanding would have rankled for a long time.

It is also obvious that in regard to "interference" the nature of the specialty makes a decided difference as to the proper course for the specialist to pursue. For instance, a dentist, though wisely following the policy of communicating with the family physician as to the general health of each patient, certainly is at liberty to consider his ministrations entirely unhandicapped by any allegiance to a physician. To a slightly less degree the oculist may follow the same course. Laryngologic, genito-urinary, and dermatologic practice are likely to encroach somewhat upon the field of general medicine. Neurology, general surgery, gynecology, gastroenterology, and some other specialties require in most instances a formal consideration of how the patient is best treated generally, and greater care must be exercised to avoid trespass upon the domain of the family physician.

The more intimately a specialty involves problems connected with the general condition of a patient, the more difficult does it become to codify ethical principles into formal rules. On the one hand, the specialist cannot regard himself as independently attending to some local condition; on the other, he often encounters cases in which he is not called as consultant in the old-fashioned way, and in which a single, formal consultation cannot prove satisfactory to any of the three parties interested. It becomes, then, a nice problem to balance properly his own rights, those of the former or present attendant, and, the most important factor of all, the best interests of the patient. It is obvious that neither general practitioner nor specialist can in the true ethical spirit assume to dictate just what part the other shall play, certainly not from a selfish mercenary standpoint, without considering the patient's interests, and not even when his own opinion is that the other may be set aside without jeopardizing the outcome of the case. Perfectly sincere differences of opinion may develop, and the slightest tendency to jealousy and selfishness may cause all sorts of trouble. In such unfortunate instances the patient is in very much the same position as the small boy when one of his companions says to another, "Le's you and me fight and have Johnny stand the blows."

But while codifications of ethics are of very little service in such cases, and, indeed, even serve to embarrass the solution of the problem, a proper grasp of the ethical spirit always enables two men to act harmoniously, and in the writer's experience it has been extremely rare that friction of any kind has occurred. This experience, covering a considerable period and a large number of individual instances with many physicians, both general practitioners and specialists of almost every branch, may well be taken as indicating a high order of professional *esprit de corps* and a general prevalence of ethical ideals.

In spite of some opposition on the ground of interference with State rights, the House Committee on Interstate and Foreign Commerce has agreed, says a contemporary, to make a favorable report on a committee substitute for the Williams bill to extend Federal control of quarantines. According to the plan proposed, the Secretary of the Treasury is placed in direct control of quarantine, and is to administer it through the Public the medical profession. In a recent address delivered by Dr. priation of $500,000.

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EDITORIAL ARTICLES.

PURE DRUGS.

Various industrial enterprises have been more or less agitated by the so-called pure food bill, and it is doubtful if the railroad rate bill has shaken more profoundly the foundations of certain industrial agencies than has this measure. The difficulty of defining undefinable terms is apparent the moment one comes to a consideration of adulterants and preservatives. The addition of a small quantity of common salt to a product may have a preserving effect, and the substance in question will not be considered to have been adulterated by its addition; but add to the substance a small quantity of salicylic acid in equally harmless quantities as the salt, and the substance has suffered adulteration in addition to preservation.

The intent of the bill is doubtless beneficent—that of protecting the purchaser from buying what he does not intend to buy—and in the main its provisions will be found acceptable to the medical profession. In a recent address delivered by Dr. C. A. L. Reed, the interest of the medical profession in this bill was mentioned. The profession is interested in this measure from the knowledge of the influence of impure food on public health, but especially from the common practice of drug adulteration and attenuation.

Dr. Reed in his address says: "As a matter of fact, while the Pharmacopœia assumes to establish a certain standard of drugs, there is at present no national law nor, so far as I am informed, any State law to enforce that standard. As a consequence, manufacturing establishments, some of them enjoying

a high grade of commercial respectability, openly acknowledge that they manufacture pharmaceutical preparations of varying degrees of purity. They plead in extenuation that this is to meet the demands of the market. The better druggists—those enjoying a high-class trade—are presumed to dispense the purest of the preparations. Those located in middle-class localities take the second grade, while the lowest, or third grade, is sold to public health departments, hospitals, and eleemosynary institutions and country drug stores, but more especially to country practitioners who dispense their own medicines. That there should be any but one grade, and that the highest grade of pharmaceutical preparations, is an idea so repugnant to every sense of honesty, decency, and common humanity that the present situation becomes revolting. If, then, we go a step further and consider that class of copyrighted preparations that are dispensed by physicians—the so-called 'professional proprietaries'—we discover that the trade interests are absolutely without other restraint than that which is presumed to come from the effects, assumed or demonstrated, of such medicaments on the patients to whom they are administered. In this class of remedies there is not even theoretically a pharmaceutical standard, save as it applies to the ingredients of compounds, and there is no law that will hold the manufacturers of such remedies to the standard which they assume to establish for themselves."

These words constitute a grave indictment of certain manufacturing concerns, and such an accusation would not have been made, probably, without grave reasons for its support. The high-class manufacturers will gladly comply with any requirements of physiological and chemical testing. It is they who have been pioneers in this kind of work. Where chemical assay is impossible they have provided physiological standards as the tests of excellence. Make the provisions as hard of attainment as possible, and the great manufacturers of the country will not only be the first to comply with these requirements, but will be the first to exceed them when any excellence hitherto attained can be achieved thereby.

The interests of the best manufacturing concerns and those of the medical profession are identical—to provide one standard of purity of excellence, that the honest prescriber may know that he invariably administers an honest drug, one destined to fulfil its therapeutical pretensions.

EDITORIAL NOTES.

A Medieval Medical Act.

A writer in a German exchange recently published an interesting bit of medieval medical history. It consisted of the Latin text of an ordinance made with the authority of the Provincial Council of Treves, and issued by Baldwin Luxemburg, Archbishop of Treves, on April 29, 1310. The ordinance sets forth that "it has come to the knowledge of the Council that many unlearned persons whose mode of life and moral character are unknown presume to give instruction in the arts of medicine and surgery in the city of Treves, and in the towns and villages of the province. These persons give themselves out as teachers without ever having been students. Many, too, who are inexperienced and unskilful prescribe medicines, whereby many disasters are known to have occurred." Wherefore the Archbishop forbids, under pain of excommunication, any one to practice or teach medicine or surgery in the province without his license or that of the bishop of the diocese. "For," says the enlightened prelate, "it is fitting that those who profess to be skilled in regard to the health of the body—a matter of the very highest importance—should be first examined and approved in regard to knowledge and to morals. In such extremely dangerous and difficult matters every one must be presumed to be ignorant unless he can prove that he has knowledge." We learn from this ordinance that even in those long gone years quacks preyed upon the unsuspecting in much the same manner as in these enlightened days.

An Institution to Combat Infant Mortality.

Statistics show that in Germany the death-rate among infants under one year of age is exceedingly high. They show that during the year 1903, of the 3,000,000 children born in Germany, over 400,000 died. Efforts are now under contemplation by the authorities to reduce this mortality, and to this end an institution is to be founded in a suburb of Berlin, under the patronage of the Empress, who has contributed a large sum for the purpose. It is proposed to make the institution largely an educational one, and departments will be provided in which nursing women with their infants will be received for a period not to exceed three months. Others are intended for pregnant women, for labor cases, for artifically nourished children, and for children

born outside of the institution. There will also be erected a hospital section for sick children, a model dairy, a training school for midwives and nurses. Chemical and bacteriological laboratories will also be included. If some of the philanthropists in this country would establish like institutions near our large cities, much more good could be accomplished than by erecting libraries, etc.

To Prevent Yellow Fever.

Since the recent epidemic of yellow fever in New Orleans much work has been done to lessen the possibilities of another outbreak of a like nature in the towns on the southern coast. Acting Assistant Surgeon Sheely of the United States Public Health and Marine Hospital Service, in a recent issue of Public Health Reports, urges the following: (1) Removal of stagnant water and all receptacles capable of affording breeding grounds for the stegomyia; (2) screening and oiling of all cisterns before March 1; (3) the efficient screening of all houses with screens not less than 16 meshes to the inch, by the same date; (4) provision of at least one mosquito-proof screen to be used on the first sign of any febrile disease; (5) a general fumigation of every house on one of the coldest days in February, so as to kill the stegomyia in winter quarters. The rigid following of these rules would make an outbreak of yellow fever an impossibility.

Success in the Practice of Medicine.

In a recent address delivered before the students of Aberdeen University, Sir Frederick Treves spoke on the factors that make for a successful career in the practice of medicine. He said that all who start to practice have within their reach all that goes to make the successful medical man. The factors that really tell, he assured his audience, are health, special knowledge, sympathy, and honesty, industry being presupposed. We doubt very much if these requirements are so easily within the reach of all. In the first place, it is not given to every one to have robust health, and on health certainly depends industry, and even to some extent sympathy. For the acquisition of special knowledge there must be special opportunity. The majority of practitioners find their time too much occupied with gaining a mere existence to attempt to gain special knowledge. We think that the distinguished surgeon is a trifle too optimistic when he says that the factors of success are within the reach of every one.

ITEMS AND NOTES.

The Medical Society of New Jersey will hold its annual meeting at Atlantic City on June 19 to 21, 1906.

At a marriage recently solemnized in a Kentucky town the bridegroom was 101 and the bride 100 years of age.

His Royal Highness Duke Carl Theodor of Bavaria recently performed his five thousandth operation for cataract.

Dr. Findley, of Chicago, has accepted the chair of gynecology in the College of Medicine in the University of Nebraska, Omaha.

The German Society of Orthopedic Surgery held its fifth congress at Breslau on April 3, under the presidency of Prof. Adolf Lorenz.

The Berlin Society of Science has awarded to Dr. Iwan Bloch, of Berlin, the sum of $25 in furtherance of his well known investigation of the history of syphilis.

Of 138 women matriculated in the German universities during the current winter semester, 73 are studying medicine. In the last summer semester there were 75.

Of 79 theses for the degree of Doctor of Medicine presented to the Universities of Geneva and Lausanne, during 1905, no fewer than 42 were offered by women. If we may judge from the names of the authors, all but some half-dozen of the ladies were Russians or Poles.

The Hungarian Ministry of Public Instruction proposes to extend the system of medical inspection to elementary schools. The medical officers will be required to watch the bodily development and supervise the health of children throughout the whole period of their school life.

According to a recently published report of General Linevitch on the sanitary condition of the Manchurian army, there are 220 cases of Siberian plague. The total number of sick in the hospitals is 744 officers and 14,282 men, of whom 1584 are suffering from contagious diseases, including 612 cases of typhus fever.

Dom Fournier, a Benedictine monk of the Abbey of Solesmo, who before entering the order was a medical practitioner, has compiled a book on the canonized saints who have been members of the medical profession. He has succeeded in unearthing no fewer than sixty-eight. Most of them belong to the early days of Christianity.

The Berlin Postgraduate Medical School, known as the Kaiserin Friedrich Haus, was opened by the Emperor and the Empress on March 1. It was officially recognized by the Centralcomité that the New York Postgraduate School had served as a model in many respects, and Dr. D. B. St. John Roosa and Dr. Carl Beck were invited as honorary guests.

Prof. Emil von Behring has announced his determination to adhere to the resolution which he promulgated in Paris, of keeping his tuberculosis remedy secret until autumn. He discussed his method of preventing tuberculosis by immunizing milch cows. His theory is that children fed on milk rendered immune through his treatment become themselves immune.

Among the members of the medical profession in foreign countries who have recently died are Dr. Mitrophan Popoff, emeritus professor of anatomy in the University of Kharkoff, aged sixty-two; Dr. Rudolph Schelske, lecturer on ophthalmology in the University of Berlin, aged seventy-six; Dr. H. Cuffer, physician to the Necker Hospital, Paris, aged fifty-five.

The officers of the International Medical College, at Lisbon, have requested Dr. Clark Bell, president of the American Medico-Legal Society, to organize an Auxiliary Committee to secure contributions to the medicolegal sections of the Congress; embracing medicolegal, military, naval, and railway surgery, hygiene, and epidemiology. Dr. Bell requests persons interested in those subjects to communicate with him at 39 Broadway, New York.

Representatives of steamship, railroad, and commercial interests of Cuba visited President Palma to solicit, says an exchange, his intercession with Washington against threatened quarantines at gulf ports. After a consultation with the Cuban health officers, President Palma will instruct Minister Quesada. He is again urging the ministerial leaders to press the pending appropriation for general sanitation, so as to leave no ground for criticism.

BEFORE the Fifteenth International Congress of Medicine, Prof. Rubert W. Boyce, F.R.S., will give an address on the "Prophylaxis of Yellow Fever as the Result of the 1905 Epidemic in Central America and New Orleans." This address will take the place of the communication promised by Sir Patrick Manson, who is unavoidably prevented from attending the meeting at Lisbon.

THE Medical Chamber of Upper Bavaria has decided to urge upon the proper authorities the need for the provision of adequate teaching on social legislation, workmen's compensation for accidents, the framing of reports, etc. The opinion is expressed that chairs of such subjects should be established in the Bavarian universities, and that the University of Munich should lead the way in the reform.

A STUDENT at the Creighton Medical College, Omaha, is about to sue the faculty for $50,000, on the ground that as the result of hazing he has been completely incapacitated. He states that he was dragged from his classroom by sophomores, who intended to throw him into a ventilating shaft. He fought, and was kicked in the back, his spine being injured, and he has had to use crutches ever since.

THE United States government has virtually decided upon the appointment of a pathologist to take charge of the hospital and laboratory for the study of leprosy on the island of Molokai. Dr. W. R. Brinkerhoff, instructor in pathology at the Harvard Medical School, has been selected for the post. Dr. Brinkerhoff coöperated with Dr. W. T. Councilman and Dr. G. B. Magrath in their studies on smallpox, and made investigations on the same subject in the Philippine Islands.

DR. DOMENICO BARBIERI, of Vienna, has bequeathed a sum of 300,000 crowns for the creation of a fund to be called by the name of Theodor Billroth. Dr. Barbieri was an assistant and a close personal friend of the famous Vienna surgeon, who entrusted him with the administration of the anesthetic in some of his most daring operations. The interest of the fund is to be given in bursaries to poor students in the Second Surgical Clinic of Vienna, of which Billroth was the head, and, if possible, also to students in the first clinic. The bursaries which are to be awarded by the Professorial College without distinction of nationality or creed are of the yearly value of 2000 crowns, and are tenable for three years.

The most important measures before the Massachusetts legislature, thinks the *Boston Post,* are those for the suppression of child labor and the restriction of the hours of employment of women in factories. "There must be a strengthening of the statutes, more ample provision made for their enforcement. greater power given to the officials charged with the work of protection, if Massachusetts is to maintain the place of leadership which she has taken in this great reform."

Professor Hamy, the eminent anthropologist, has submitted a curious phenomenon to the Academy of Medicine in Paris and to the Berlin Acadamy. He reports that a negress living in the Gold Coast colony gave birth recently to sextuplets. Photographs were shown of the six infants, who, although they were well formed, died shortly after their birth. This, says the Professor, is probably the first time that a birth of sextuplets has been established.

The German Verein für innere Medizin celebrated its silver jubilee on February 19. The association was founded in 1881 by Professor von Leyden, who delivered an address in which he reviewed its history. Surgeon-General Schjerning, Professor Quinke (Kiel), Professor Jaffe (Königsberg), Professor Litten, Professor von Schrotter (Vienna), Professor Maragliano (Genoa), Professor Pel (Amsterdam), and Professor Kernig (St. Petersburg) were elected honorary members.

A department of tropical diseases and hygiene has been established in connection with the Berlin Institute of Infectious Diseases. Dr. Claus Schilling has been appointed head of the new department. He took his doctor's degree at Munich in 1895, and was afterward assistant in the University Pathological Institute under Professor Bollinger. Later Dr. Schilling accepted a post in the Bacteriological Laboratory of the Imperial Health Bureau at Berlin. In 1900 he went out as government medical officer to Togo. For a year past he has been working in the Berlin Institute of Infectious Diseases. Dr. Schilling is the author of many contributions to bacteriological and pathological literature.

The National Board of Public Health of the Republic of Argentina has issued, says the *Journal of the American Medical Association,* some new regulations respecting Sunday rest. Among them is one which requires the pharmacies to close on

Sunday, one in each precinct remaining open, while the others are closed. Each pharmacy takes its turn in remaining open, and the board has issued a list of the various pharmacies with the date of their open Sunday, the police being instructed to enforce the decree. In Germany the physicians in a number of towns are combining in the same way to obtain their Sunday rest. They have been in the habit of holding office hours on Sunday as on other days. Now only one office will be open in a precinct, each physician taking his turn.

The Exhibition of the History of Medicine in Art, which is to be held in Berlin on the occasion of the opening of the Empress Frederick Institution for Postgraduation Medical Study in Berlin, will comprise a large collection of incunabula of medicine. A feature of special interest will be a collection of manuscripts of the thirteenth century, among them documents belonging to the scholastic period, some of which have never been described. Painting in relation to medicine will be well represented, partly by reproductions and copies, but also by original works to the number of about fifty. In this part of the exhibition, Holland, where art has so often found inspiration in medicine, will naturally be particularly prominent. Among the pictures will be original portraits of Albinus, Camper, and others, and the lately discovered large oil painting of Andreas Vesalius by Van Calcar.

The Madrid Faculty of Medicine has, says the *Journal of the American Medical Association,* recently published a list of the scientific works of Ramon y Cajal, its great histologist. Although only fifty-four years old, he has published 162 works, and has received the Fauvelle prize, the Helmholtz medal, and the prize given by the International Medical Congress at Moscow, and has been invited to deliver the Croomian and other important lectures in foreign lands. He is also honorary member of two dozen scientific societies outside of Spain. The *Siglo Medico* of Madrid comments with amazement on what this great scientist has accomplished alone, without means and without aid, almost forgotten by the immediate circle around him, until reminded of his existence by the honors heaped on him from foreign countries. His father was professor of anatomy at Saragossa, and his own first official position was the chair of anatomy at Valencia. His works have mostly been published in book form, or in the *Revista Trimestral Micrografica.* He visited this country in 1899 to lecture, on invitation, at Clark University.

NEW PUBLICATIONS.

CHRISTIANITY AND SEX PROBLEMS.

The important topics touched on in this work are treated in a manner which will be found pleasing to the majority of thoughtful readers. The attitude maintained by the author is not strikingly novel in any particular, and his suggestions are nearly always in accordance with time-honored standards of Christian morality. The book is an extremely useful one, and nothing but general good can come from the diffusion of the views exemplified within its pages. The author deals with difficult questions in a reverent spirit, and if there be little that is not conventional in his dictates, this does not detract from the general soundness of his conclusions.

Christianity and Sex Problems. By Hugh Northcote, M.A. The F. A. Davis Co., Philadelphia.

THE SIGNS OF INTERNAL DISEASE.

The present volume affords the reader an admirable description of the main symptoms and physical signs of internal disease. As a manual of physical diagnosis the work will find a place in the library of the student or physician. It is clearly and simply written, and is embellished with an array of illustrations possessing considerable artistic merit. The exaltation of objective methods of research and investigation seems always uppermost in the author's mind, and as a result of this he has produced a work of more than ordinary utility.

The Signs of Internal Disease. By Pearce Kintzing, B.Sc., M.D., Professor of Physical Diagnosis, Maryland Medical College. Illustrated. The Cleveland Press, Chicago.

THE ECLECTIC PRACTICE OF MEDICINE.

Save in some few minor points of therapy it is difficult to see in what respects a manual of eclectic practice differs from the standard text-books. It suffices to say that the present work is in most respects high in its scientific standard, and will repay perusal by the thoughtful and unbiased practitioner.

The Eclectic Practice of Medicine. By Rolla L. Thomas, M.D., Professor of the Principles and Practice of Medicine in the Eclectic Medical Institute, Cincinnati, Ohio; Ex-President of the National Eclectic Medical Association; Consulting Physician to the Seton Hospital. Illustrated with two lithographs in colors, six colored prints, and 57 figures in black. 8vo, 1033 pages. Price, cloth, $6.00; sheep, $7.00. The Scudder Brothers Company, Publishers, 1009 Plum Street, Cincinnati, Ohio.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Tumors of the Breast and Other Affections Interesting to Both Physician and Surgeon.

Clarence A. McWilliams (*Medical Record,* Dec. 16, 1905) in discussing tumors of the breast says that they should always be looked upon with the greatest suspicion, for 85 per cent of all such growths are malignant. The operation recommended consists in the removal of the entire breast, the excision of the skin going wide of the growth, both pectoral muscles, and the lymphatics and fatty tissues of the axilla. In one hundred operations for cancer of the breast at the Presbyterian Hospital there were four deaths as the immediate consequence of the operation. At the end of three years there was no recurrence in 34 per cent of the cases. Movable kidney is usually amenable to treatment by non-operative means, and of these the author has found Gallant's corset very useful. For fractures of the patella the author's practice is to operate openly in almost all cases in which age or some constitutional dyscrasia does not contraindicate, provided there be considerable separation of the fragments —*i.e.,* one-half inch or more. He does not operate in simple fracture of the patella until at least five days have elapsed after the injury, because infection has been shown to be eight times more liable to occur if the operation be done immediately after the injury, when one must deal with acutely inflamed tissues, than if one operates at an interval when processes of repair are well established. If the patient complains of rheumatism of the feet, the following conditions should be kept in mind while making an exact and careful examination: Flat feet, including the weak foot, anterior metatarsalgia or Morton's toe, gonorrheal arthritis or periarthritis, tuberculosis of the ankle or tarsus, the result either of an old fracture or sprain of the tarsus, tabes, etc. The treatment of flatfoot is given in detail, and is said to afford almost certain cure.

The differential diagnosis of ectopic pregnancy is dwelt upon, and of Talma's operation the author says it promises well if done sufficiently early and the viscera are in fairly good condition. In considering the question of prostatic hypertrophy he

says that in general operation is called for only when palliative treatment is a failure. If the symptoms grow constantly worse, if the suffering becomes severe, if the patient cannot urinate without the use of an instrument, if catheterization is painful or impossible, if the patient is too ignorant or careless to trust with a catheter, if only a catheter of very small size can be introduced, if attacks of obstinate retention occur, if there is persistent or recurring cystitis or hematuria, if there are signs of beginning infection of the kidney, if the residual urine gradually increases in amount, and if stone be present, the bladder should be opened. The perineal operation of Young is preferred.

Abscess of Antrum Causing Symptoms of Acute Articular Rheumatism.

K. K. Wheelock (*American Medicine,* Feb. 17, 1906) reports a case of pneumococcic infection of the antrum of Highmore, which developed polyarthritis with general symptoms of acute articular rheumatism. The patient had been suffering from a "cold in the head" with free discharge from the right nostril from the beginning of the attack. The frontal sinus was washed by means of a cannula, and on the following day she had a severe chill, which was followed by rise of temperature, and she was confined to her bed for twenty-four hours. Later she had severe pain in right knee, left elbow and shoulder. This pain and tenderness lasted about forty-eight hours. The second day following the chill the temperature was 100° F. Pus from the first was to be seen between the anterior end of the middle turbinate and external wall of the right naris. Exploratory probe puncture was made, and two teaspoonfuls of thick pus worked out, which showed pneumococci. Following the flushing of the antrum the naris was free from pus. Pain returned on the following day, when the antrum was again flushed and about one teaspoonful of pus brought away. Patient made a rapid recovery following the last lavage, and regained the weight which she had lost during her illness.

Site of Origin of Gall-stones.

L. L. McArthur (*Journal of the American Medical Association,* Dec. 9, 1905) reports a case in which there was total absence of prior illness and no colic, but operation revealed innumerable stones in the ducts with offensive bacillus pus and no stones in

the gall-bladder. There were also innumerable stones in the finer hepatic ducts, with suppurative cholangitis. The stones consisted of cholesterin alone, bilirubin calcium alone, or varying proportions of both, cholesterin usually predominating. He concludes from his consideration of this case: (1) All gall-stones do not originate in the gall-bladder. (2) The origin of cholesterin stones is probably in the gall-bladder, with subsequent growth either in the gall-bladder or ducts, where they may lodge. (3) Bilirubin calcium is the constituent of the smaller intrahepatic ducts. (4) Calculi in immense numbers may have existed for months in the ducts without producing a symptom. (5) The surgeon need not reproach himself too much if there be recurrence of the symptoms after drainage.

Sutures and Their Preparation.

W. H. Watters (*Medical Record,* Jan. 6, 1906) refers to the difficulties attending the sterilization of catgut and commends highly a method devised by W. F. Wesselhoeft. This consists in placing the separate strands in a small envelope which is enclosed in a larger one. The envelopes are dried and packed in a small brass case which is filled to a definite point with alcohol, and is closed hermetically with screw bolts. The case is then immersed in boiling water for an hour. This raises the temperature of the contents to 212° and develops a pressure of twenty-five pounds to the square inch, thus insuring thorough impregnation of the catgut with the alcohol. The envelopes dry in a short time on removal from the alcohol. The advantages of the method are that it is simple and inexpensive to carry out, while both practical experience and the author's culture experiments prove that absolute sterility is obtained. Fractional sterilization is illusory in dealing with catgut.

The Dumb-bell Intestinal Anastomosis.

J. B. Bacon (*Journal of the American Medical Association,* Jan. 6, 1906) describes a new device for intestinal anastomosis, consisting of a hollow, dumb-bell-shaped aluminum bobbin, over which the invaginated intestinal walls are tied through a counter-opening, which is afterward sutured. Detailed descriptions are given of the methods of the various kinds of anastomoses, end-to-end, lateral, and gastroduodenal. The following advantages

are claimed for the appliance: Simplicity of construction and operation; absolute safety against leakage; quickness of application; impossibility of lodgment in the intestine; non-necessity of reënforced sutures; minimal amount of cicatricial tissue remaining. The article is illustrated.

MEDICINE.

Arteriosclerosis as a General Disease.

Alfred Stengel (*American Medicine,* Feb. 10, 1906) says the conception of arteriosclerosis as merely a passive process of hardening of the vessels is now completely out of date. A proper picture of the condition portrays a more general disturbance of the whole organism. Three stages of the disease may be recognized: (1) A preliminary one difficult of recognition in its beginnings and confusing to the clinician in his first efforts to distinguish what part the etiologic factors have contributed to the symptom-complex, and what part has resulted from the arterial disease itself. (2) A middle period, during which the arterial disease is easy to recognize, but in which secondary organic changes have a rôle of variable importance. (3) A final stage of failure of circulation, organic failure, and terminal infection. Arteriosclerosis as ordinarily seen begins in middle or later life, progresses regularly and slowly, involving all the vessels uniformly, and causing a coincident involution of the body as a whole. Contrasted with this is the form seen in younger subjects, more rapid in its course, showing a tendency to the greater involvement of certain vessels, causing notable functional disturbances. In this form especially are the general changes quite out of proportion to the arterial involvement. Some investigators have insisted that there is a preliminary presclerotic stage of continued high blood-pressure attributed either to a spasm of the arterioles due to toxic or nervous influences, or to a change in the viscosity of the blood causing obstruction to the circulation.

Dr. Stengel's clinical studies have shown that in the earliest stages there is rather a condition of decreased tension with a tendency to temporary or paroxysmal elevations, that the condition is one of loss of elasticity in the vessels, due in part to toxic alterations (degenerations) in the vessel walls. Among the varieties of early arteriosclerosis he has observed several

more or less distinct types: The nutritional type, presenting obscure disturbance of general health, with a tendency to digestive disorders, and anemia or pseudoanemia; the neurasthenic type, with or without definite nutritional disorders; the nervous type, with the tendency to vertigo, tinnitus, syncopal attacks in early stages or temporary paralysis, spasmodic or convulsive disorders, or disturbances of consciousness in advanced disease. In the more advanced stages of arteriosclerosis the disease may be classified under the following headings: (1) The thoracic: (*a*) Cardiac, or disturbances incident upon special involvement of the coronary arteries; (*b*) aortic, referring not merely to aneurism, but also to a sclerotic and calcareous roughening without dilatation, but causing embarrassment of cardiac action. (2) Abdominal: (*a*) Renal, manifesting itself in the symptoms of chronic interstitial nephritis; (*b*) intestinal, as evidenced by atrophy of the mucous membrane, tendency to chronic colitis, etc.; (*c*) pancreatic, difficult of recognition, often, however, active in diabetes; (*d*) hepatic, occurring as cirrhosis; (*e*) cerebrospinal, most numerous and varied; and (*f*) arteriocapillary, manifested in moderate circulatory disturbances.

Epilepsy the Strangest Disease in Human History.

Wm. P. Spratling (*Medical Record,* Dec. 30, 1905) points out some of the remarkable features of this disease, such as its many types, uncertain etiology, occurrence at all ages and in all stages of society, etc. Much progress has been made of recent years in its study, and the time has gone by when we speak simply of "epilepsy" and prescribe bromides. We now make repeated and thorough physical, clinical, and microscopical examinations of cases of epilepsy to determine if possible the cause or causes of the disease before any treatment is applied; and we must now perforce speak of "the epilepsies" instead of "epilepsy," for the types and subdivisions of the disease are exceedingly numerous. Patient investigation is needed to uncover more of its mysteries, but the author predicts that when we shall finally come fully to understand the necessity of treating the epileptic bodily and as an individual, as a preliminary step in the more specific treatment of his disease, and after we shall have sufficiently developed our laboratory methods, we will cure epilepsy as often as insanity is cured to-day—that is, in 25 to 30 per cent of all cases. Finally, he speaks of the advantages

attending the colony treatment of the disease, and urges widespread support of the principles of the National Association for the Study of Epilepsy, etc.

Phlebosclerosis.

T. B. Frankenheimer (*California State Journal of Medicine,* February, 1906) says that phlebosclerosis is more common than is generally supposed.

While there is no direct relationship, age predisposes to it.

There is no direct parallelism between phlebosclerosis and arteriosclerosis.

The excessive use of alcohol and tobacco seems to be an etiological factor, directly or indirectly.

Lead poisoning and syphilis, contrary to expectation, have probably slight or no influence on the production of phlebosclerosis.

The comparative infrequency of varicose veins in cases of phlebosclerosis seems to show that phlebosclerosis is a conservative rather than a degenerative process.

Previous infectious diseases (except tuberculosis) seem to play no part in the production of phlebosclerosis.

Apparently phlebosclerosis has no diagnostic or prognostic significance.

While there may be many causes of phlebosclerosis which we have not determined, the most important factor (judging from this short series of cases) is cough, the purely mechanical trauma being the starting-point for the sclerosis.

Fetor in Ozena.

Frese (*Deut. Arch. für klin. Med.,* Bd. 26) finds that the odor in ozena is due to a number of sources: an important factor is the abundance of the volatile fatty acids which are produced by the decomposition of the neutral fats. The secretion as secreted is odorless, but it is rapidly decomposed, not only by the so-called ozena bacillus but by a number of microörganisms. The products of tertiary syphilis are analogous.

Eosinophilia in Trichiniasis.

C. Staubli (*Deutsches Arch. für klin. Med.,* 3, 1906) from his examination in seven cases of trichiniasis accentuates the

value of eosinophilia as an aid in diagnosis. The eosinophiles begin to increase about nine days after eating the infected meat. Their multiplication is closely related to the migration of the embryos into the muscles, and is an evidence of the reaction of the organism to certain substances given off from the embryos. Four of his cases died, and in these he noted the similar occurrence of Kernig's sign and the loss of the patellar reflex.

THERAPEUTICS.

Treatment of Appendicitis.

O. B. Campbell (*St. Louis Medical Review,* Feb. 24, 1906) says that (1) in incipient appendicitis, until the patient is placed in the hands of the surgeon, all food and drink should be withheld, and the patient nourished per rectum. (2) Every patient should be advised of the advantages of an early operation. (3) The removal of the appendix, or the closure of an opening in the cecum, should be made, in abscess cases, when it can be done without additional risk to the life of the patient. (4) The practice of merely draining in every abscess case should be condemned as non-surgical. (5) Operation during a progressive diffuse peritonitis is attended with a higher mortality than the method of procedure recommended by the writer. (6) If the internist will direct his efforts in the treatment of appendicitis toward the protection of the peritoneum until he can transfer his case to the surgeon, the mortality in this disease will be greatly lessened. (7) The adoption of the more rational method of dealing with diffuse peritonitis will convert a large percentage of these cases into circumscribed peritonitis, when they can be rightly classed as large abscess cases, having the same mortality.

The Treatment of Morphinism.

A. J. Pressey (*Journal of the American Medical Association,* Dec. 23, 1905) finds from his own experience and that of others that the hyoscine treatment with rapid withdrawal of morphine in morphine habitués is irrational and unsafe. The vomiting and diarrhea are unpleasant accompaniments, and the hallucinations which last for an uncertain time with this treatment may become permanent. Convalescence is greatly protracted, and relapses, he thinks, are more frequent. The slow, gradual with-

drawal, adapted to the individual case, on the other hand, is rational, safe, and satisfactory. It is accompanied by no vomiting, diarrhea, or extreme nervousness, or any of the other severe symptoms that are likely to attend the quick method. Convalescence is well advanced when the last morphine is withdrawn, and is nearly always rapidly completed. Relapses are also less frequent. It is important in any case, whatever the treatment, that the patient remain under the physician's care a sufficient time to insure a good physical and mental condition.

Treatment of Warts and Corns.

Arthur Evershed (*Journal of Cutaneous Diseases,* February, 1906) says that the best and most effective remedy in the treatment of warts and corns is sea water. Daily sea bathing or warm foot baths will cause the corns to peel off in a fortnight. Warts on the hands are treated by placing the affected parts in warm sea water or a solution of sea salt twice a day for at least ten minutes at a time. Cauliflower warts of the scalp will yield to this method of treatment, though not so quickly as those on the hands. They are best treated by the application of a compress of sea water left on all night, and repeated each night for two weeks.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Vaccination Under the Influence of Red Light.

Dr. Goldmann at a recent meeting of the Vienna Clinical Society (*Lancet,* Feb. 24, 1906) read a paper on his experiments as regards vaccination under red light. Influenced by Gärtner's result of treatment of varioloids and variola, he systematically vaccinated the children in a photographic room which was illuminated by a photographic lamp, and bandaged the arm with calico which was saturated in a 10-per-cent solution of eosin. In order to test the exactness of the bandage sensitive photographic paper was enclosed under the bandage with the sensitive side laid outward. When the bandage was removed only those cases were taken into consideration in which the paper had remained unchanged. The time from the vaccination till the

removal of the bandage varied from five days to three weeks. The pustules developed normally, but the areola was only from one to two millimeters wide. There was no swelling of the axillary glands, and no pain occurred in the arm with the red bandage, whilst the other arm, which was vaccinated also under red light, but had been subjected to the influence of diffused daylight, showed inflammatory symptoms. The children with the red bandage had also no rise of temperature.

Dr. Goldmann made another series of experiments. He vaccinated the children under red light, bandaged them with red calico, and left the bandage for four days; then he exchanged it for the usual white bandage, which is permeable by the chemical active rays; he found that the pustules and the swelling were much larger, just as if he had applied only white light. If he covered normally vaccinated inflamed arms with red bandages, he was able to reduce the inflammation, but if the vaccination had produced an abscess the red bandage had no effect whatever.

Vaccination under red light has now been carried out for a period of one year, and Dr. Goldmann is preparing to revaccinate the same children year by year to find out how long this effect will last.

GYNECOLOGY AND OBSTETRICS.

Puerperal Morbidity.

In the annual report of the Rotunda Hospital, Professor Tweedy (*Dublin Journal of Medical Science,* February, 1906) discusses incidentally the question of the standard of puerperal morbidity, and advocates in the interest of the patients a more stringent test than is usually adopted for hospital statistics. Changing the limit of temperature from 100.8° to 99° F. for thirty-six hours, along with the pulse over 89 p. min., increases the number of his morbid cases from 159 to 202, and even in the large clientele of the Rotunda this makes an appreciable difference in the percentage of morbidity. There is no doubt that in the interest of our patients we habitually attend to subfebrile abnormalities of temperature which at times indicate conditions or impending conditions requiring treatment, and it would probably be a general advantage if our clinical and statistical standards were assimilated.

The paragraphs on the treatment of septic cases indicate a

changing opinion. Professor Tweedy now looks upon the use of the flushing curette as unjustifiable; but the facts that his constitutional treatment consists of tincture of perchloride of iron in 40-minim doses three times a day, mercurial inunctions or calomel in small doses by the mouth, stimulants and nourishment in large quantities, and that one case is recorded as doing badly with antistreptococcic serum and another well on Credé ointment, show that we have not yet reached stability in the therapy of puerperal sepsis.

The Difficulty in Forensic Certification of Retained Portions of the After-birth.

O. Kuestner (*British Gynecological Journal,* February, 1906) points out that blood-clots are apt to be taken for portions of membrane, and when the decidua are badly developed one is likely to suppose that much more placental tissue has been left behind than is proved by more exact, and especially by microscopical, examination. The formation of a placenta succenturiata has a peculiar significance in the question, and the recognition of the presence of such a condition is far too little understood. The torn fragments of blood-vessels leading from the principal to the subsidiary placenta are of special importance in this point, and also the way in which the decidua are separated. The text-books for midwives should give more information on these points.

On the Rupture of Cicatrices of Cæsarian Section in Subsequent Pregnancies.

A. Werth (*Berliner klin. Woch.,* No. 2, 1906) gives eleven cases of the kind already published, and adds an observation of his own in which rupture of the uterus occurred in a pregnancy two years after Cæsarian section of the same womb. The uterus had to be amputated. He discusses the mechanism of the rupture and describes the syndromata and diagnosis, and finally the treatment of such cases of rupture of the scar. Neither the material employed for suture nor the locus of the incision appears to have any influence upon the resistance of the scar.

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ORIGINAL CONTRIBUTIONS.

PATHOLOGIC PHYSIOLOGY OF THE TRACTUS INTESTINALIS.

BY BYRON ROBINSON, CHICAGO.

The physiology of the tractus intestinalis is peristalsis, absorption, secretion, and sensation; its object is to afford general corporeal nourishment. One or all of the functions of the physiology of the tractus intestinalis may present pathologic physiology without demonstrable pathologic anatomy.

A typical example of pathologic physiology in the tractus intestinalis is the emesis—*e.g.*, by some, from the observation of a fly in the soup. This is disordered function, introduced so rapidly that pathologic anatomy has insufficient time to become established. The so-called reflexes are pathologic physiology. One may observe pathologic physiology when a herd of cattle is placed on a boat; when the boat starts the cattle become excited, nervous, a number having immediate and frequent liquid stools. The peristalsis and secretion of the tractus intestinalis liquefying the feces and expelling them—pathologic physiology but not pathologic anatomy was detectable. A typical example of the utility of pathologic physiology in the tractus intestinalis is the diarrhea of puerperal sepsis, which frequently saves the patient. Certain kinds of food produce pathologic physiology. It is an excessive fermentation—gas. This may be observed the most certainly in the digestion of leguminous substances—*e.g.*, beans.

Pathologic physiology may be manifest by excessive, deficient, or disproportionate peristalsis, absorption, secretion, and sensation. The practitioner observes and treats the following conditions:

(1) PERISTALSIS (EXCESSIVE, DEFICIENT, DISPROPORTIONATE).

The tractus intestinalis possesses peculiar physiologic movements known as peristalsis, vermicular motion, passing through

periodic activity and repose. Though each segment (gastrium, enteron, colon) possesses peristalsis in common, however, the structure, function, and object of each segment are so different that peristalsis in each segment—gastrium, enteron, and colon—is best studied separately. The factors which intimate motion in the tractus intestinalis are: (*a*) blood-supply; (*b*) ingesta; (*c*) secretion; (*d*) temperature; (*e*) sensation.

(*a*) *Excessive Peristalsis (Stomach).*—Increased gastric movements (pathologic physiology) may arise from excessive secretion of HCl, hence excessively rapid gastric evacuation. Increased gastric movements or contractions may arise from pyloric obstruction. Gastric, enteronic, and colonic peristaltic unrest may be prominent without known cause, with perhaps an irritable, defective nervous system—a kind of motor neurosis. The splanchnic nerves are perhaps the chief motor nerves of the digestive tract. The peristaltic unrest (pathologic physiology) is eminently manifest in certain individuals, as evidenced by the frequent gurgling, splashing sounds heard when standing in close proximity. During fright excessive intestinal peristalsis may occur with sudden evacuation of the colon. Excessive peristalsis may occur during pregnancy or on observation of disgusting matters (as a fly in the soup); intense decomposing odors of certain forms of food create peristaltic unrest. The frequent wild and disordered peristalsis in the digestive tract of the child is based on pathologic physiology—not pathologic anatomy. It rests on disordered peristalsis, due to the fact that Auerbach's plexus is not fully developed or established in office. The cramps, colic, emesis, and diarrhea arise and disappear so quickly that insufficient time exists for pathologic anatomy. Vomiting is pathologic physiology, as it forcibly, artificially, dilates the cardiac sphincter of the stomach.

(*b*) *Deficient Peristalsis.*—The most typical example in the tractus intestinalis of deficient peristalsis is constipation—the so-called sluggish bowels. Evacuation of the digestive tract (especially the stomach and colon) is defective, incomplete. Dilatation of the stomach (generally due to compression of the transverse duodenum by the superior artery, vein, and nerve) results in a series of consequences, as decomposition, fermentation, toxemia, and inability to force food through the pylorus. The acute gastric dilatation is simply an exacerbation of a previous dilatation. I have shown in numerous cadavers that no pyloric obstruction exists, that it is gastroduodenal dilatation

due to compression of the mesenteric vessels. Gastroduodenal dilatation is a stage of enteroptosia.

(*c*) *Disproportionate peristalsis* consists of non-uniform, irregular, disordered muscular movements. It is peristalsis uncontrolled, like the irregular invaginations of death, and the test of diagnosis is that the invagination is not pathologic anatomy—simply pathologic physiology.

(2) SECRETION (EXCESSIVE, DEFICIENT, DISPROPORTIONATE).

(*d*) *Excessive secretion,* pathologic physiology, is observed in diarrhea. Many kinds of irritating foods induce it. Doubtless excessive secretion is due to the variations in HCl. Chronic supersecretion is perhaps connected with superacidity. Excessive secretion of the tractus intestinalis is frequently found in neurotic patients, in neurasthenics, in hysteria. Hunger plays a rôle—*e.g.,* when a hungry subject views food. Abdominal secretion occurs in chronic dyspepsia. Hypersecretion doubtless depends on the blood volume in the stomach, enteron, or colon. Hypersecretion frequently accompanies gastroptosia (which is generally gastroduodenal dilatation) because the gastroptosia is accompanied by stagnation of food material and irritates the gastric wall. The fasting stomach may present supersecretion on reception of food, known as alimentary supersecretion—hyperchlorhydria from an unknown cause. Infectious processes induce supersecretion as well as ulceration and epithelial desquamation.

In the duodenum, the most important segment of the tractus intestinalis, arrives the extra-glandular secretion, succus pancreaticus and succus bilis. These naturally abundant extra-glandular secretions when possessing the pathologic physiology of excess will present a widely varying zone of effect on nutrition. The excess of biliary secretion, pathologic physiology, is difficult to estimate, as the bile is reabsorbed and its excessively flooding stream prevents the formation of biliary concrements. However, we know that by the driving of cattle several miles previous to slaughter an excess of bile collects in the cholecyst—demonstrating a wide range of variation in the time and quantity of biliary secretion. Excessive biliary secretion may be the cause of glycosuria, allowing insufficient time for completion of processes.

The pathologic physiology of excess of pancreatic secretions is as equally difficult to estimate as that of biliary. Excessive succus pancreaticus practically prohibits pancreatic calculus.

Enteron and colon. Excess of enteronic and colonic secretion

is apparent in diarrhea, in fluid evacuations. Abnormal excessive intestinal secretions are not well understood. The pathologic physiology of excessive intestinal secretion rests chiefly on the kinds or chemistry of food and bacteria within the digestive canal. The multiplication of bacteria incites the intestine to extra secretion. The abnormal bacterial process may continue within the intestinal lumen. The number of bacterial residents usually constitute about one-third of the weight of the dry fecal masses. It is evident from this view that bacteria are a necessary part of the tractus intestinalis of higher organisms. The child's tractus intestinalis possesses a bacterial flora by the fourth day of extra-uterine life. Excessive colonic secretion, pathologic physiology, is well known in mucous colitis, or what I consider a better term, secretion neurosis of the colon.

(*c*) Stomach. *Deficient secretion* of the tractus intestinalis constitutes a frequent condition of pathologic physiology. The most evidently marked state of deficient intestinal secretion is constipation. Deficient secretion of HCl, the most significant secretory gastric function in the stomach, may exist, indicating malignancy, chronic gastritis, infectious disease, acute functional disease, presenting a wide zone of pathologic physiology. Deficient HCl is especially noted in gastric carcinoma. Deficient secretion of HCl changes the bacterial process, as normal gastric secretion is doubtless antiseptic. The most important means to check the microbic process in the stomach are continuous movements of food and frequent evacuations. With deficient HCl the bacteria multiply in stagnating stomach contents, increasing lactic acid, which favors bacterial growth. Deficient HCl enhances the decomposition of albumen in the enteron and colon. Abundant bacterial decomposition from deficient HCl produces products which irritate the gastric mucosa, inducing pain, colic vomiting, defective appetite, gas.

Duodenum. The business segment of the digestive tract is the enteron, into which flows the succus bilis et succus pancreaticus.

Deficient biliary secretion may manifest itself by clay-colored stools, by icterus, by calculus obstructing biliary flow. Pathologic physiology in deficient biliary secretion presents a frequent and an extensive range of action. Deficient biliary secretion occurs with deficient amounts of appropriate food, hence the necessity of rational dietetics. Deficient biliary secretion lays the foundation for the most distressing of hepatic diseases—hepatic calculus. The deficient hepatic secretion induces a limited quantity of bile

with a slow stream, allowing ample opportunity for crystallization and the formation of biliary concrements. The hepatic calculus consists chiefly of cholesterin and calcium salts of bilirubin. Naunyn has demonstrated that the quantity of cholesterin and calcium salts of bilirubin is independent of the kinds of ingesta, hence to prevent biliary concrements we must employ visceral drainage to maintain such salts in mechanical suspension, and irrigate, flood them onward by powerful, large biliary streams. For dissolving cholesterin the bile possesses powerful agents in cholate, sapo, adeps.

Since cholesterin appears in the bile as crystals or in combination with desquamated epithelial cells, the powerful, large biliary stream from ample visceral drainage will flood, irrigate, the precipitated collected crystals and concrements into the duodenum. Deficient biliary flow is liable to become stagnant, favoring bacterial growth and bile channel infection, because the volume of bile stream being diminished does not excite the biliary channels to vigorous peristalsis, and consequent defective flushing of the bile passages occurs. Deficient biliary secretion is accompanied by the pathologic physiology of diminished bile stream, stagnation of bile from diminished biliary peristalsis, defective irrigation of the biliary passages, the precipitation or formation of cholesterin and calcium and bilirubin crystals or concrements, infection of the biliary passages, insufficient quantity of bile for digestion (clay-colored, decomposed stools), icterus from obstruction of bile passages, and changed direction of bile stream; calculus in the biliary channels may produce disease only when infection arises or the calculus becomes clamped (pain, colic). Inflammation (cholecystitis) creates violent peristalsis of the biliary channels and hence projects the calculus in various directions, until it is finally impressed, engaged, whence pain and colic.

In icterus the bile with its coloring material becomes transfused through the body, in the blood and lymph—presenting typical pathologic physiology. Icterus depends on complete closure of the ductus communis choledochus, but it may depend on hepatitis. For the origin of icterus the kind of disease is less significant than its seat.

Deficient pancreatic secretion is diagnosed by the undigested fat in the stools. In 700 personal autopsic inspections I observed but one complete failure of pancreatic secretions. This subject possessed a carcinomatous invasion of the ductus choledochus and ductus pancreaticus, producing complete obstruction of both ducts. In ten weeks the patient lost 113 pounds. The biliary

passages (exclusive of the cholecyst) were dilated seven times their original caliber, and the ductus pancreaticus was dilated some twenty times its original caliber. The pancreas possesses two exit ducts, patent perhaps in 60 per cent of subjects. If one becomes obstructed the other acts vicariously for both. In the above cited subject Santorini's duct no doubt conducted succus pancreaticus into the duodenum. Deficient secretion from the pancreas arises from partial and complete obstruction of its ducts by calculus, neoplasm, or by degeneration of the organ.

Deficient secretion in the enteron is not understood. Deficient secretion in the colon results in the well known disease constipation. The central nervous system as well as the abdominal sympathetic are influential in diminishing secretion. The fact is that the pure results of constipation are preponderating, psychic, and subjective. The assimilation of the individual constipation does not suffer materially, however; defecation is laborious, and the care for the evacuation and anxiety as to food selection increases the neurosis; with the evacuation the head becomes free, the voice becomes cheerful—the effect is mainly suggestive.

(*f*) *Disproportionate secretion* is where the secretions of the segments of the tractus intestinalis are irregular, non-uniform, disordered. When such disordered secretions mingle, fermentation occurs with consequent tympanites. The gastric secretions may be disproportionate, resulting in disordered digestion. Biliary secretion may be excessive, pancreatic secretions deficient, thus making secretions disproportionate, and the same conditions may occur in the enteron and colon.

(3) ABSORPTION (EXCESSIVE, DEFICIENT, DISPROPORTIONATE).

(*g*) *Excessive absorption* of the digestive tract is difficult to demonstrate. However, it is conceivable that the absorptive apparatus of the tractus intestinalis might work excessively, absorbing substances which injure the system. Decomposing ingesta, bacterial products, toxins, may be too rapidly absorbed—excessive absorption, inducing constipation.

(*h*) *Deficient absorption* in the tractus intestinalis is not infrequent. We notice this factor when the food passes per rectum undigested. Excessive peristaltic movements may be so rapid that insufficient time is allowed absorption. Deficient pancreatic secretions do not prepare the fats sufficiently for absorption—hence deficient absorption, pathologic physiology, may rest on many factors—neurosis, excessive or deficient peristalsis, unsuitable ingesta, infection.

(*i*) *Disproportionate absorption* occurs, but it is difficult to demonstrate the non-uniform, unequal, disordered absorption of the three segments—gastrium, enteron, colon.

(4) SENSATION (EXCESSIVE, DEFICIENT, DISPROPORTIONATE).

(*j*) *Excessive gastric sensation* (hyperesthesia of mucosa) not infrequently arises. The healthy subject notices the digestive organs only when hunger arises or the gastrium becomes excessively occupied with ingesta or gas; one might state that it is a distinct function of the tractus intestinalis to manifest hunger. The psychical condition is also of direct influence. Hunger and distention of the stomach are related because subjects afflicted with superactivity manifest hunger shortly after ingesting meat, which is rapidly evacuated through the pylorus, leaving an empty stomach with recurring secretions. Hunger and appetites do not always correspond. One may feel hungry, but does not eat, as the appetite fails. The Scotch poetry tells much of a story:

> Some have meat but cannot eat,
> Some can eat but have no meat.

It is possible that activity of both motion and secretion induces appetite which has a wide zone of pathologic physiology. In excessive sensation or gastric hyperesthesia the sensation of gastric pressure or fulness in eating arises sooner than it does in the healthy—in fact sooner than the stomach becomes full. Occasionally we meet a patient who on taking ingesta experiences gastric pain—this may be neuralgia, superacidity, ulceration, carcinoma, perigastric peritoneal adhesions. The superacidity, irritable gastric muscularis may experience pain from direct effects on the sensitive nerves—*i.e.,* superacidity induces muscular colic. The fearful "gastric crises" in tabes and the other spinal affections are founded on degeneration and irritation of the vagus. It is well known that certain individuals are supersensitive not only in general but as to special organs—*e.g.,* some will vomit on seeing a fly in the soup. From sensitive stomachs appear to arise dizziness, sensory waves, neuralgia, anomalies of cardiac innervation, also nuclear functional disturbances; however, I would suggest that such attributions of numerous disturbances rather belong to the abdominal brain. The innumerable "gastric reflexes" are receptions, reorganizations, and omissions of the abdominal brain. Vomiting, sooner or later after ingesta, may occur from hyperesthesia of the gastric mucosa. I have had several patients with excessive sensation or hyper-

esthesia of the gastric mucosa. One patient vomited shortly after taking food for fourteen years. Her stomach absorbed sufficient to maintain a fair condition of flesh. Another vomited for two years almost immediately after eating. Excessive sensation in the gastric mucosa presents a wide zone of pathologic physiology in the various degrees of vomiting during gestation. Many subjects possess an extraordinary delicacy and sensitiveness in regard to the stomach. If such subjects exercise care in selection of food and prudence in eating they remain relatively healthy. This pretended and acquired idiosyncrasy is annoyingly manifest in practice, when we are continually meeting people who cannot take certain kinds of food, as eggs, milk, Graham bread, fruits, etc., etc.; such patients cannot live in an ordinary boarding-house. Either by heredity or chiefly by habit the employment of certain kinds of food has a wide range of pathologic physiology. The psychical state perhaps plays the preponderating rôle in idiosyncrasy of foods. The so-called nervous dyspeptic experiences all kinds of sensations in his stomach. There is no structural change in the stomach to correspond to all the functional manifestations—it is pathologic physiology. The crawling of animals within the stomach and tractus intestinalis may be interpreted as ingesta or gas passing over the hyperesthetic or supersensitive mucosa.

(*k*) *Deficient sensation* in the tractus intestinalis doubtless explains the so-called sluggish bowel, the constipation. The absorption of the food is insufficient. It is not uncommon for patients to tell me that the bowels are dead, no feeling in them.

(*l*) *Disproportionate sensation* is non-uniform, irregularly located by hyperesthesia and anesthesia of the mucosa in the different segments of the digestive tract—gastrium, enteron, colon. In sensation of the tractus intestinalis, excessive, deficient, or disproportionate, there is no relation between anomalies of function and anatomic structure. Anomalies of function may present no recognizable anatomic changes—it is simply pathologic physiology. The gastric mucosa rapidly changes at death, hence cautious examinations are required in autopsies. As regards the relations between the kind of anatomic changes and functional disturbances we are but little informed by any investigations.

PATHOLOGIC PHYSIOLOGY OF THE TRACTUS NERVOSUS IN REGARD TO THE TRACTUS INTESTINALIS.

The tractus nervosus influences two spheres, viz., corporeal and mental. The nervous system extends to the deepest and

most profound secrets of life, mental and physical; hence it possesses the highest differentiation of all visceral tracts. The functions of the tractus intestinalis vary within a wide zone of pathologic physiology—*e.g.*, many subjects pass a week without defecation, or subjects may practice two defecations daily. The tractus intestinalis is preponderatingly controlled by the abdominal sympathetic or nervus vasomotorius. It requires a decade for the nervus vasomotorius to establish its control, its more independent rule. The wild and disordered peristalsis of a child is due to the cerebrum and Auerbach's ganglionic plexus not being completely balanced in control. A child is frequently subject to peristaltic unrest, intestinal invagination (pathologic physiology). Frequently, not long before death in adults the cerebrum and Auerbach's ganglionic plexus lose their complete balance (especially the cerebrum being less influential), and the invagination of death arises. Though the function of the nervus vasomotorius is beyond the control of the will, digestion proceeds in spite of us or while we sleep, yet the mind is influenced by the state of the digestive tract. The five abdominal visceral tracts (tractus genitalis, urinarius, intestinalis, lymphaticus, vascularis) exist in an exquisitely balanced or poised state, hence the so-called reflexes from one visceral tract to another, accomplished through the nervus vasomotorius, exert extensive influence in producing pathologic physiology—yes, many conditions of pathologic physiology arise in different visceral tracts. The essential conditions of a reflex are (*a*) an intact sensory periphery (receiver); (*b*) an intact ganglion cell—pelvic or abdominal brain reorganizer; (*c*) an intact concluding apparatus (transmitter). A pure reflex consists of a sensation transmitted to a reorganizing center which emits it over a motor apparatus.

A reflex is independent of will. The abdominal viscera are not only intimately connected, associated by means of the tractus vascularis, tractus lymphaticus, tractus nervosus, but especially by the peritoneum. Any excessive irritation in any one of the exquisitely poised visceral tracts immediately unbalances the others—at first producing pathologic physiology, and perhaps later pathologic anatomy. Hence the sensory apparatus in each visceral tract is significant. The reflex from one visceral tract to the other disorders (*a*) the blood circulation; (*b*) lymph circulation; (*c*) absorption; (*d*) secretion; (*e*) peristalsis; (*f*) sensation—*e.g.*, when the gestation contents distend the uterus, uneven expansion stimulates, irritates, the sensory apparatus of the uterus. The sensation is transmitted over the plexus

interiliacus and plexus ovaricus to the abdominal brain, where reorganization occurs, whence the stimulus is emitted over the plexus gastricus to the gastrium, with end results of excessive gastric peristalsis and vomiting. Other abdominal visceral tracts are likewise affected by this uterine reflex, but do not manifest such prominent symptoms as vomiting. Vomiting is pathologic physiology. Ordinary function, as gestation, will induce pathologic physiology in the tractus intestinalis by: (*a*) reflexes; (*b*) robbing it of considerable blood—the extra amount required for the tractus genitalis to gestate the child; (*c*) instituting indigestion and constipation from limited blood-supply. A calculus in the tractus urinarius (ureter) will produce numerous reflexes with consequent pathologic physiology in the several abdominal visceral tracts, viz., disordered peristalsis, absorption, secretion, sensation—not pathologic anatomy.

TREATMENT OF PATHOLOGIC PHYSIOLOGY OF THE TRACTUS INTESTINALIS.

Since pathologic physiology is the zone between physiology and pathologic anatomy it should be practically amenable to treatment. First and foremost the diagnosis should be made and the cause be removed, as a ureteral calculus, anal fissure, hepatic calculus, or any point of visceral or dietetic irritation. The most essential feature of subjects suffering from pathologic physiology of the tractus intestinalis is deficient *visceral drainage*. The blood is excessively waste-laden from insufficient elimination. The secretions are scanty. The urine is concentrated; its crystallized salts are evident to the eye. The skin is dry from insufficient perspiration. Sleep is defective from the bathing of the innumerable ganglia with waste-laden blood. Constipation, deficient urine, limited perspiration, capricious appetite, and insomnia characterize subjects with pathologic physiology of the tractus intestinalis. For many years I have applied a treatment to such subjects which I term

VISCERAL DRAINAGE.

Visceral drainage signifies that visceral tracts are placed at maximum elimination by dietetics, fluids, appropriate hygiene and habitat, and exercise. The waste products of food and tissue are sewered before new ones are encountered. The most important principle in internal medication is ample visceral drainage. The residue of food and tissue should have a maximum drainage

in health. I suggest that ample visceral drainage may be executed by means of (A) *fluids;* (B) *food.*

(A) *Visceral Drainage by Fluids.*—The most effective diuretic is water. One of the best laxatives is water. One of the best stimulants of renal epithelium is sodium chloride (½ to ¼ physiologic salt solution). Hence I administer 8 ounces of half-normal salt solution to a patient six times daily, two hours apart (*Note*—NaCl is contraindicated in parenchymatous nephritis); 48 ounces of half-normal salt solution efficiently increases the drain of the kidney, it sustains in mechanical suspension the insoluble uric acid, it stimulates other matters, it aids the sodium, potassium, or ammonium salts to form combinations with uric acid, producing soluble urates. The half-normal salt solution effectively stimulates the peristalsis and epithelium of the tractus intestinalis, inducing secretions which liquefy stool, preventing constipation.

(B) *Visceral Drainage by Foods.*—The great functions of the tractus intestinalis—peristalsis, absorption, secretion—are produced and maintained by food. To drain the tractus intestinalis foods which leave an indigestible residue only are appropriate. Rational foods must contain appropriate salts whose bases may form combinations which are soluble, as sodium and potassium combined with uric acid and urates to form soluble urates. The proper foods are cereals, vegetables, albuminates (milk, eggs), mixed foods. Meats should be limited as they enhance excessive uric acid formation. In order to stimulate the epithelium of the digestive tract (sensation), with consequent increase of peristalsis, absorption, and secretion, I use a part or multiple of an alkaline tablet of the following composition: Cascara sagrada (1/40 gr.), aloes (1/3 gr.), $NaHCO_3$ (1 gr.), $KHCO_3$ (1/3 gr.), $MGSO_4$ (2 gr.). The tablet is used as follows: One-sixth to one tablet (or more, as required to move the bowels once daily) is placed on the tongue before meals and followed by 8 ounces of water (better hot). At 10 A.M., 3 P.M., and bedtime, one-sixth to one tablet is placed on the tongue and followed by a glassful of fluid. In combined treatment one-third of the NaCl, the sodium chloride, tablet containing 11 grains, and one-sixth to three alkaline tablets, are placed on the tongue together every two hours, followed by a glass of fluid. This method of treatment furnishes alkaline bases (sodium and potassium and ammonium) to combine with the free uric acid in the urine, producing perfectly soluble alkaline urates and materially diminishing the free uric acid in the urine. Besides the alkaline

laxative tablet increases the peristalsis, absorption, and secretion of the intestinal tract, stimulating the sensation of the mucosa, aiding evacuation. I have termed the sodium chloride and alkaline laxative method *the visceral drainage treatment.* The alkaline and sodium chloride tablets take the place of the so-called mineral waters. I continue this dietetic treatment of fluid and food for weeks, months, and the results are remarkably successful in pathologic physiology. The urine becomes clarified, like spring water, and increased in quantity. The tractus intestinalis becomes freely evacuated, regularly daily. The blood is relieved of waste-laden and irritating material. The tractus cutis eliminates freely, and the skin becomes normal. The appetite increases. The sleep becomes improved. The patient becomes hopeful, natural energy returns. The sewers of the body are well drained and flushed.

COUNTRY VS. CITY HYGIENE.

BY A. L. BENEDICT, M.D., BUFFALO.

There is a very general impression, inculcated by various authorities, beginning with the Third Reader and ending with certain formal treatises on hygiene, that residents of the country are far healthier, happier, more moral, and longer lived than those of cities. This impression was unquestionably correct in the old days, when sanitation was largely a matter of isolation and dilution of sources of infection by air and water, and spontaneous destruction of germs by natural vicissitudes. So long as cities depended upon wells and cisterns for their water, and so long as garbage and excrement were allowed to accumulate and rot in crowded courts or narrow streets, and so long as the supply of light and air was determined purely by individual choice and ability to commend a choice, urban life was a matter of the survival, not necessarily of the fittest but of the toughest and luckiest.

Even within the memory of comparatively young persons, municipal water-supplies have been not merely unguarded but positively and permanently subject to gross contamination, and sewerage has been neglected. Visitors to Philadelphia during the Centennial Exhibition of 1876 could see sewage flowing in open gutters in the main streets, and it was at about the same date that many of the principal European cities began to be "canalized" (sewered). It is scarcely more than ten years since

cities with considerably contaminated water-supplies began to institute sedimentation and filtration devices, and even to-day cities with only moderate typhoid incidence cannot develop popular opinion to the point of establishing sand filtration of water. The policy of saving valuable fertilizing material and of protecting down-stream communities by the establishment of sewage farms is still regarded as chimerical by most persons.

At the same time the process of municipal sanitation has progressed to such a degree that the opinion is warranted that city life is now more healthful and consequently of greater average duration than country life. But it must be admitted that this opinion is not susceptible of statistic proof. On the contrary, the latest United States census shows a preponderance of mortality and a less average age at death for cities as compared with rural districts. To state an opinion contrary to statistics seems folly, but it must be remembered that the tables contain glaring discrepancies, or, at least, surprising differences of death-rates, that the urban death-rate is increased in many cases by the inclusion of comparatively small and unsanitary towns, and that rural statistics are, in general, more likely to be inaccurate in regard to deaths than to population. Again, the large cities attract a relatively large proportion of immigrants, whose death-rate is high, and the disabled, floating population, a high proportion of which is practically dying. Moreover, within recent years, a very considerable number of persons have gone to large cities for medical and surgical treatment of desperate conditions. A large minority of these die and are charged to the death-rate of the city in question, without even increasing the total population record. To consider these factors at all in detail would consume too much space. The following figures are, however, significant:

Deaths per 1000 population in registration cities, 1890, 22.15.

Deaths per 1000 population in registration cities, 1900, 18.61.

Deaths per 1000 population in rural parts of registration States, 1890, 15.33.

Deaths per 1000 population in rural parts of registration States, 1900, 15.39.

Many individual cities show mortality-rates below that of the rural districts.

One of the writer's principal reasons for believing that the mortality of the country is higher than that of the city is the fact that small villages support more physicians than the cities, relatively to population, and that the country doctor usually seems to have more to do than his confrère of the city.

Comparing the well-to-do class of the city and the country, there seems to be no question that the former is more fortunate from the hygienic standpoint. This depends largely upon the greater specialization of labor in the city. Excepting as a carefully guarded passenger or in crossing lines of travel, the city resident of this class—to which the further discussion of the subject is mainly limited—incurs no danger from vehicles and beasts of draft and burden. He is almost entirely removed from the danger of machinery or of tools. Infections and traumatisms due to the lower animals and to handling foodstuffs are equally remote. The cooking of food, washing of clothes, disposition of garbage and excreta, and similar potential dangers are for the most part relegated to an entirely different class. Exposure to cold and damp, and the dangers of the elements generally, are minimized for the urban resident. Association with persons of bad morals, filthy habits, and liable to inflict bodily damage, is much less intimate in the city. While every opportunity is offered in the city for the indulgence in vice and in excesses of amusement and work, there is also an abundant provision of innocent and temperate amusement, and quite elaborate, organized opposition to intemperance and vice. It is scarcely necessary to call to mind the fact that "The wages of sin is death," nor that preceding death come long years of disablement. Nor is it right to leave the impression that the moral tone of the country is lower than of the city, only that the immorality and disease of the city is more specialized in the submerged stratum, and that sedimentation has not occurred so thoroughly in the country.

It may be of practical value to point out some special dangers which one going from the city to the country may encounter, and in so doing we refer to the real country, and not to the *urbs in rure* which some of our wealthy citizens establish.

First of all, the mere fact that habits of life are very different may have an important hygienic influence, without regard to the relative merits of the two lives. The hours of sleep begin earlier in the country and end at about the time when the city resident is getting the very best portion of his rest. The occupation of the farmer involves vastly more muscular exertion and more exposure to the elements, he is less able to follow a definite schedule, but is subject to delay and self-sacrifice in protecting his interests from the elements and in looking after domestic animals. While the city resident must usually work hard, he is in nearly every instance accustomed to obedience and promptness of

service from others in return. Even the poorest expects at least that the trolley car shall be on hand to meet his demands at the proper time, and he fumes and frets, perhaps blasphemes, if his plans are interfered with. The sum total of trivial inconveniences, annoyances, delays, and discomforts which country life involves may be entirely sufficient to wreck the nervous system of one suddenly changing from city life. Even if it does not do this the mental reaction may be sufficient to alienate the good-will of his new neighbors, and in the country one is dependent upon neighbors to a degree well-nigh intolerable to the city resident.

Diet in the country is also quite different from that to which the city resident is accustomed. Very wisely, the farmer working near his home and starting work at four, five, or six in the morning, takes his dinner at noon, and as he goes to bed early he eats a comparatively light supper. Equally wisely, the city resident eats his heartiest meal when he has finished his day's work and can enjoy his leisure. But when one has to conform to the habits of the other the digestive secretions are confused. The diet itself is altered by physiologic necessity and economic considerations. Thus the farmer, requiring more muscular energy, eats relatively large quantities of fat pork, potatoes, bread and butter, and other foods containing fats and starches. In the city the nervous tension calls for meats, while any one in health and having a good appetite can scarcely eat as little fat and carbohydrate as is actually needed. Again, both as a result of physiologic reflexes and economic considerations, the city resident is accustomed to a much greater variety of foods, of foods designed especially to tickle the palate, and of food adjuvants, than he can ordinarily find in the country. From his standpoint there is too much salt pork and ham, too little fresh meat, too much canned stuff, too little soup, salads, and side-dishes; he is especially grieved to find that fruits, though supposed to grow in the country, are extremely limited in kind, duration, and amount; he finds that bread and butter occupy too prominent a place in the menu, and that desserts are too starchy and lacking in fruit additions.

Allusion has been made to another great difference between city and country life. For the average, and not by any means wealthy, city resident the period of work is separated from that of sleep by a definite, daily period of rest and recreation, covering about five hours, and easily extended for an occasional innocent excess of pleasure to at least twice this period. While the

farmer is very far from passing all his time in working, eating, and sleeping, the five or six pleasantest months of the year make such heavy demands upon his resources of strength—and upon those of every member of his family—and inclement weather is so apt to interfere with his possible recreation during the winter and spring, that he lacks this regular and ample period of enjoyment of life that even much humbler city workers accept as a matter of course. It is very probable that the early aging of country residents and the excess of insanity among farmers' wives, as compared with urban residents, are due largely to this point of difference of habit.

It is popularly supposed that pure air and quiet are characteristic of the country. But the disturbing influence of sound does not depend solely upon the degree to which it moves the otoliths. A high-pitched sound is usually more disturbing of rest than one of low pitch, and one which is regular, or familiar, or purposive is less disturbing than one of opposite significance. Generally speaking, it is folly to advise going to the country to get rid of insomnia. Tree toads, frogs, insects, roosters, stamping horses, and the early sounds of domestic activity will usually have a worse immediate effect than trolley cars, belated vehicles, fog-horns, and railroad trains. Thus, as a rule, persons going from city to country, or *vice versa*, are likely to sleep poorly for several nights.

It is usually impossible in the country to have the outhouses sufficiently far from the residence to avoid the odor of animals and of manure, including the peculiarly offensive smells of pigsties and henneries. Many crops are more or less odorous, barley having a faint, sickly smell, and having a toxic effect on many men that are compelled to handle it, especially in mowing away. Probably the *ne plus ultra* in this way, however, is a richly manured field of cabbages. Skunks are usually in evidence every few evenings, and while their scent, well diluted, is much more pleasant to the writer than that of musk, tuberoses, and other perfumes deliberately sought, it is quite likely to be offensive. Mere odors, however offensive and however unsanitary their source, are not very serious, but they may prevent rest and may inhibit the appetite, or even cause reflex gastric disturbances or occasionally precipitate attacks of asthma.

One of the worst features of average country life is the privy. This name is a euphemism and is etymologically objectionable, since it is usually so placed as to violate every regard for privacy. Its use is considered more or less effeminate, and the country

boy scorns its shelter, depositing his excrement in the stable or on the ground. Thus contamination of water-course, wells, etc., or even opportunities for accidental direct conveyance of infectious germs, are more numerous in the country than might appear from a cursory investigation of density of population. The privy is frequently so near a well, or it drains so freely into a seam in the rock communicating with a well, that gross contamination of the water-supply occurs. Or, if the privy is cleaned out and its contents used as manure shortly after the occurrence of an infectious disease, especially typhoid, contamination of vegetables or of surface water may occur. Otherwise the privy is not directly and bacteriologically so harmful as it might appear. To state a scientific fact unscientifically, no self-respecting disease germ can live in the mixed society of saprophytes which are so numerous in a vault.

When we consider the privy, which has now, happily, almost disappeared from cities, we can readily understand why constipation was formerly so prevalent, especially among women. The indoors, water-flushed toilet room is a point of election; the blistering hot or freezing cold outdoors privy with its stench and publicity is a point of dire necessity. It is not too far-fetched to suppose that the fly and wasp bites frequently received may have caused, in the long run, an appreciable amount of sepsis, and that the exposure to cold during night attacks of diarrhea may have determined many cases of bronchitis and pneumonia. But probably the worst influence of the privy has been and is to discourage the prompt evacuation of the bowels and to lead to chronic constipation, intestinal sepsis, localized inflammation of the appendix, etc.

Deficient modes of heating country houses have, undoubtedly, predisposed to the development of rheumatism and of respiratory catarrhs. Tuberculosis of bovine type is obviously rather more prone to develop in the country than in the city, and many country houses have become fomites of tuberculosis, largely on account of the inconvenience of attending to discharges, the inaccessibility of steam renovators and of disinfection plants. We must remember that up to thirty years ago, at the utmost, there was no scientific means of diagnosing early tuberculosis, no true appreciation of its dangers nor known means of combating infection. In the country, even more than in the city, consumptives were frequent guests, and the building of new houses and complete tearing out and renovation of old ones have not occurred so frequently in the country as in the city. Thus the danger of

present house infection with tuberculosis is greater in the country.

A very important factor in regard to disease and death in the country is the impossibility of securing prompt medical and surgical intervention. The writer believes that on the average the practical efficiency of country doctors is fully equal to that of city doctors. But, in the first place, there is greater danger of undiscovered accident or incapacitation in the country than in the city. For example, a farmer injured by a mowing machine, or falling in a barn, or having a stroke of apoplexy or a sunstroke while at work, may lie helpless for hours, and his wife, in the house, may be similarly without assistance. Of course, many cases of accident and sickness are overlooked in the city, but the chances of discovery are much greater. In the second place, the summoning and arrival of a physician are much slower processes in the country, although the recent installation of telephones and attention to roads are lessening the difference. In the third place, special medical or surgical skill and conveniences for caring for the patient remain, and must long remain, relatively inaccessible in the country.

The writer does not by any means overlook the many advantages of country life, at least for comparatively short periods during the summer, nor the many disadvantages of city residence. Yet it has so long been the custom to consider the former as ideal that it has seemed worth while to point out some of the practical reasons which render a fairly well kept city preferable from the hygienic and sanitary standpoint. It is also worth while noting that the people are beginning to appreciate the fact that certain conveniences of structure, plumbing, and heating of houses are by no means necessarily confined to the city. Farmers are comparatively well-to-do and can well afford such comforts. Moreover, rural telephones and trolley roads are tending to equalize conditions in the city and country.

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EDITORIAL ARTICLES.

RENAL DECAPSULATION FOR NEPHRITIS.

Ramon Guiteras in the *St. Louis Medical Review* has discussed this subject very thoroughly, from the statistical standpoint. In 1903 he sent a circular letter to 150 prominent surgeons, whose replies were about equally divided for and against the operation. Forty-two surgeons reported one hundred and twenty cases, in which 16 per cent were said to have been cured, 40 per cent improved, 11 per cent unimproved, and 33 per cent died soon after operation.

It might be suggested that surgeons are rather prone to make medical diagnoses with a facility that surprises the internist. It may be altogether unjust, but suspicion must be aroused that some of the cases diagnosed as nephritis were simply cases of congestion or of a transitory nephritis. Cases showing albumin, casts, and reduced eliminating power, but clearing up very rapidly, are quite common, especially when so severe as to suggest surgical intervention.

In the latter part of 1905 Dr. Guiteras sent another letter asking a further report from the same forty-two surgeons. Exactly half replied, and it is altogether likely that this half represented the more favorable results from operation. Excluding nephropexy, forty of the one hundred and twenty cases were now accounted for. One was well, three improved, three unimproved, thirty-three (82.5 per cent) dead. Of the cases not represented in the second report, only fifty-two were indubitably treated by stripping the capsule for conditions other than movable kidney. Seventeen of these fifty-two had already been reported as dead. It will be observed that the original series of one hundred and twenty cases really included positively only

ninety-two of the description under present discussion, and it is not unreasonable to suppose that many if not most of the twenty cured cases belonged to other groups. Unfavorable reports as to subsequent cases, not included in the first series, were also received from many of the surgeons replying to the second letter.

Dr. Guiteras quotes extensively from experimental and clinical reports on decapsulation, and most of the reports are distinctly unfavorable. He concludes that decapsulation should not be practiced for nephritis, although simple incision over the convexity may be used to relieve tension. Partial decapsulation should, obviously, form part of the operation for movable kidney, and nephrotomy—and nephrectomy—should be practiced for unilateral disease.

EDITORIAL NOTES.

Cæsarian Operation Repeated in the Same Woman.

The operation of Cæsarian section, while a comparatively rare one, is seldom ever reported as having occurred more than once in the same woman. An instance of this was recently brought to the attention of the Paris Society of Obstetrics by M. Frulinsholz, who reported a case in which this operation was repeated three times in the same woman. The woman had had two labors terminated by craniotomy, and the third and fourth pregnancies resulted in Cæsarian operation. At the eighth month of the fifth pregnancy the waters broke spontaneously. A third Cæsarian operation was therefore carried out. Numerous adhesions were found between the uterus and the abdominal walls, which were divided with the knife. The child, who was extracted alive, weighed 1800 grammes, and the placenta was implanted above and to the front. A sixth pregnancy terminated spontaneously in abortion. Such an instance is also remarkable, that any sane woman would allow herself to become pregnant when she knew from previous experience what she would have to undergo in order to have offspring.

Euthanasia.

From time to time the question of administering something to those afflicted with incurable diseases, to end their misery, is brought up for discussion. Seldom, however, do the advocates of euthanasia go so far as to attempt to legalize murder, as is shown by a bill which was presented last month to the

Iowa legislature. This measure provides for the killing of those suffering from painful disorders certain to end in death, and is also intended to prevent the rearing of hideously deformed or hopelessly idiotic children. At least three physicians and the county coroner must unanimously agree and participate in the act, and then it must be with the consent of the nearest relative, and, if practicable, of the patient himself. Any deviation from this requirement constitutes murder. A heavy fine will be imposed upon any physician who shirks his duty under this law, and also prescribes the usual penalty for first-degree murder for any abuse of it. We can only hope that such a silly measure will not receive the serious attention of the legislature.

The Treatment of Pulmonary Tuberculosis.

The modern treatment of pulmonary tuberculosis by the "open-air" method is not by any means a recent discovery, but was advocated and carried out by an English practitioner as long ago as 1838. From the *Lancet* we learn that in 1840 Dr. Bodington wrote an essay on the treatment of this disease which that journal published. This essay they have reprinted in a recent issue. It is, indeed, most interesting reading, and constitutes a remarkable prophecy of the present sanatorium treatment of pulmonary tuberculosis. The details are, of course, not so elaborate as those now adopted, but the main principles are the same—plenty of good food and life in the open air, or to adopt the author's own words, he founded his "treatment and cure" on "principles natural, rational, and successful."

Newspaper Surgery.

The wonders of surgery as reported in the daily press are shown from an account which was recently published in one of the great dailies. According to the despatch a man suffering from stone in the kidney was taken to Roosevelt Hospital, New York, and the following remarkable operation done: "The patient was operated on and *within a minute* the surgeon had the kidney out as far as possible. He held it in his hand, and with the fluoroscope found the small stone. A *moment later* the stone was removed, and within seven minutes after the first stroke of the knife the kidney had been put back into place." We cannot but wonder when reading in the newspapers anything pertaining to medicine how near they come to the truth in reporting the work of other professions.

Preserved Fruits in Lacquered Tins.

The usual method of preserving fruit in ordinary tin cans is objectionable owing to the fact that fruit juices act upon the tin and dissolve a small amount of it. We learn from a report from the *Lancet* Laboratory that an English firm of fruit preservers has overcome this old objection to the use of the tin container by a very simple method: this consists in uniformly covering the tin with a thin veneer of lacquer, which is absolutely proof against the action of fruit acids and even against the action of mineral acids. This simple method, which guards against the contamination of preserved fruits, is one that ought to be adopted by manufacturers, it being hygienically sound as well as economical.

Fewer Students of Medicine.

That only a few years will elapse before we will see the last of the proprietary medical schools is shown by the fact that the combined number of freshmen students who last fall entered the seven medical colleges of Ohio was only 205. With the strict requirements for admission to medical colleges which are now being enforced, students who have the necessary qualifications to enter seek the State Universities. Before many years have passed a great many professors of surgery and medicine will lose their envied chairs.

American Medicine Becomes a Monthly.

Our esteemed contemporary *American Medicine* announces in a recent issue that in the future it will be published monthly. We are sorry to learn that this journal will drop from the rank of weeklies. It has always stood for what is highest and best in medicine. Its editorials have always been right and have dealt with subjects of interest and importance to the profession, while its original contributions have been from men of eminence. We wish it every success in its new field of activity.

A Monster Petition.

In England there exists much more antagonism in regard to vivisection than in this country. To such an extent does this feeling prevail that there is soon to be presented to the British Parliament a petition seven miles long against the vivisection of dogs. It seems too bad that so much good paper should be wasted in such a manner.

ITEMS AND NOTES.

BUBONIC PLAGUE is said to have reappeared in New South Wales, and five cases have been reported from Sydney.

THE Iowa legislature has passed a law providing for an annual appropriation of $10,000 for a pure-food laboratory.

A MEETING was held in Vienna on March 25 to consider a scheme for the organization of the medical profession throughout the Austrian Empire.

A BILL has been introduced into the Senate of New Jersey appropriating $70,000 per annum for five years for the purpose of exterminating the mosquitoes in the New Jersey marshes.

DURING the last census taken in Uskup, Macedonia, two sisters who are centenarians have been discovered, one being 113 years old and the other 100 years old. Both are in good health.

THE first International Congress on School Hygiene was held in Nuremberg in 1904, and the next Congress will meet in London from August 5 to 10, 1907, with Sir Lauder Brunton as the president.

THE antivaccination movement is so strong in Toronto, Canada, that the public school board, in spite of protests from the local medical societies, has decided to allow unvaccinated children to attend the institutions under its control.

IT has been decided at Washington that the crews of vessels plying between Southern ports of the United States and Havana need not be yellow fever immunes. This ruling will be a great advantage to the shipping companies in both countries.

THE Belgian Chamber of Deputies has recently passed by a large majority a measure forbidding the manufacture, importation, and sale of absinthe, under penalty of fines varying from $25 to $100, and imprisonment from a week to six months.

THE canal zone physicians met last week in Panama and organized a medical society. A. B. Herrick was elected temporary chairman, and Colonel W. C. Gorgas chief sanitary officer. Captain Ira A. Shimer and Dr. Bates were appointed a committee to draw up by-laws.

Sir William Turner has completed fifty years connection with the University of Edinburgh. He came to Edinburgh as a demonstrator of anatomy; he became a professor of that subject, and was for many years dean of the medical faculty, and a few years ago he was made principal of the university.

Under the auspices of the Children's Hospital Society an organized movement for the establishment of a State colony for epileptics was started at a public meeting at the Chicago Women's Club on March 14. The principal speaker was Dr. William P. Spratling, medical superintendent of Craig Colony, New York, who spoke of the good work that was being done at Sonyea, where the colony for epileptics is located.

The commissary-general and the surgeon-general of the army have developed a plan of replacing the ration issued to enlisted men in hospitals and the nurse corps on duty in hospitals with a commutation. The change is regarded by Secretary Taft as in the public interest, and is strongly urged by the department. The change will require special provision of law, which it is hoped to have incorporated in the army bill.

After experiments for over a year, Professor Cavanaugh, of Cornell, has, says *American Medicine,* discovered a process to extract the material from the watery part of milk. He has demonstrated to the satisfaction of a large chemical company that his solution of the problem is of great practical value, and the company will soon protect the discovery by patents and be able to distribute pure milk in powdered form, needing only the addition of water to return it to its natural form.

The deaths of the following eminent foreign medical men are announced: Dr. Rudolf Schelske, formerly privat-docent of ophthalmology in the University of Berlin, and director of the eye department of the Hamburg General Hospital, aged seventy-five years; Dr. Leon Colin, formerly inspector-general of the medical department of the French army and president of the Academy of Medicine; Dr. Cuffer, physician to the Necker Hospital, Paris, where he lectured on clinical pathology.

The humanizing of the elementary school has in Neufchatel, says an exchange, reached a point which may safely be said to be in advance of anything yet attempted in any other country. A list of districts is mentioned in the cantonal newspapers in which, in the public schools, there is included in the "curriculum" the

gratuitous and compulsory administration of cod-liver oil to all children for whom the school doctors prescribe it. Contrary to the usual experience of private families in such a case, the public administration of the oil in school is stated to be attended by no refractory symptoms. They are disciplinarians in Switzerland.

The University of California, Berkeley, announces a special course in public health and sanitary science at the next summer session of the university, June 25 to August 4, providing that enough applications for the course are made before April 1 to warrant the undertaking. Water-supplies and the disposal of sewage will be discussed by Charles Gilman Hyde, C. E., assistant professor of sanitary engineering, and recently a member of the Massachusetts State Board of Health. The bacteriology of the infectious diseases will be taken up by Archibald R. Ward, assistant professor of bacteriology and director of the State Bacteriological Laboratory.

According to a newspaper despatch several young Russian women who are students at the University of Turin are being kept under surveillance by emissaries of the Russian secret service police because they are suspected of being engaged in attempting to discover the secret of the aqua tofana, the mysterious poison said to have been employed with such success by the Borgias. On the occasion of a rather serious illness suffered by the Czar some years ago it was alleged that he had been poisoned by means of a pair of gloves impregnated with one of the old Italian poisons, the composition of which had been rediscovered by Russian revolutionaries by search among the old manuscripts in which the Biblioteca Nazionale at Turin is especially rich.

The director of the Breslau, Germany, Hygienic Institute has announced the results of his mosquito-war experiments. The first object was to destroy egg-bearing females, which were found in large numbers in Breslau cellars. Fumigation was used, and the number falling on the papers placed on the floors often ran up to over 2000 mosquitoes. For destroying the larvæ in pools of water, 50 grains of "larvicide" was put into a cubic meter of water and poured into the pool. This kills all the larvæ within half an hour, but does not harm frogs and fish. To destroy the pupæ is another question which will receive attention from now on. Breslau seems to be the first city in Europe to wage a systematic war against this plague, and other German cities suffering from mosquitoes are preparing to imitate its plans.

We are requested to publish the following: "Owing to recent events in Russia, which have left many thousand unfortunate victims of the war and riot, the Russian Blue Cross, a great philanthropic organization under the high patronage of Her Imperial Highness the Grand Duchess Elizabeth Mavrikievna, which looks after the interests of sick and destitute children of all creeds and nationalities throughout the empire, has been overwhelmed with calls upon it. To meet the emergency the society has extended the scope of its work and is sending special representatives abroad. Realizing the deep interest felt among Americans for Russian unfortunates the society has delegated Mr. Boris Klebanoff as its special representative to America. Mr. Klebanoff has already arrived in New York, and has opened offices for the society in the Hudson Building, at No. 32 Broadway. The Blue Cross is in no sense a rival of the Red Cross. The latter looks after the war's physically afflicted. The Blue Cross assists the helpless young victims of war, revolution, famine, or unfortunate social circumstances. It maintains refuges, asylums, training schools, work farms, hospitals, and kindergartens. Founded in 1882, it has grown to an enormous scope, and enjoys the patronage of the royal family and leading personages in official and business life throughout Russia. It has an endowment fund of one million rubles, and receives such support from all sources in commercial life that it is practially the national charity. Some of its unique methods for raising funds may be introduced to the American public by Mr. Klebanoff."

Nurses in Convention.—The second annual meeting of the Michigan State Nurses' Association was held in the Sarah Caswell Angell Hall, April 4, 5, and 6, 1906. The chief object for which this body of women is working is the passing of an act to provide for the examination, regulation, licensing, and registration of nurses. The bill for this purpose was presented to the last legislature, but was unsuccessful, as the lawmakers at the capitol said that it would involve the appointment of another board, and that the State seemed already "board-crazy." This seemed to be the chief reason for its defeat, and the nurses of the State are simply going to try again, feeling sure that the object is a good one, and that eventually the legislature must accede to the wishes of a large number of people, both professional and lay. James B. Angell, LL.D., president of the University of Michigan, gave the address of welcome at the opening session of the association. Dr. Beverly D. Harrison, secretary of the State Board of Medical Registration, gave an address on

"State Registration for Nurses." Miss Sophia F. Palmer, editor of the *American Journal of Nursing,* who has had a vast amount of experience in New York and other States, helping to pass similar bills, followed Dr. Harrison with some sound advice in plain language on "How to Pass this Bill." Among many good points which she made was this: "The strongest 'pull' on the legislature is that State registration will protect the public, and the public must ask for this protection for themselves. A petition signed by prominent citizens and professional men, as lawyers, doctors, and clergymen, will have more weight with the legislature than one signed by nurses alone, though this is also absolutely necessary." At the afternoon session of Wednesday Mrs. Caroline Bartlett Crane, who has made a study of almshouses, their management, and their inmates, read a most eloquent and impressive article on "A Neglected Field of Nursing, the County Almshouse." Dr. Charles B. A. de Nancrede's surgical clinic at the University of Michigan Hospital was well attended by the nurses. Victor C. Vaughn, M.D., dean of the Department of Medicine and Surgery of the University of Michigan, read an article entitled "Tuberculosis," which should be of interest to every trained nurse in the country, showing plainly as it did the almost unlimited scope of the nurse's work in caring for tubercular patients, and protecting their friends and the public from its dangers. Mrs. L. J. Lupinski, who has spent some time in a well known hospital for the treatment of tuberculosis, led the discussion on Dr. Vaughn's paper, by telling of the methods in vogue in giving the fresh-air treatment and the nurse's duties in carrying out these methods. A complimentary concert by members of the faculty of the University School of Music, under the direction of Prof. Albert A. Stanley, on the evening of Tuesday, April 4, and a reception at the Barbour Gymnasium by the graduate nurses of Ann Arbor on the evening of Wednesday, April 5, were well attended and much appreciated. Indeed, the hospitality of the people of Ann Arbor will ever be remembered by the nurses of the State Association as one of the most pleasant features of the meeting. The officers elected for 1906 are as follows: President, Miss Sarah E. Sly, Birmingham, Mich.; first vice-president, Mrs. L. E. Gretter, Harper Hospital, Detroit, Mich.; second vice-president, Miss E. L. Parker, State School for the Blind, Lansing, Mich.; treasurer, Miss Anna M. Coleman, Saginaw General Hospital, Saginaw, Mich.; recording secretary, Miss Agnes Deans, Detroit, Mich.; corresponding secretary, Miss Katherine Gifford, Grand Rapids, Mich.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Resection of the Shoulder-joint.

N. Catter (*British Medical Journal*, March 3, 1906) points out that a rational method of resection of the shoulder should fulfil the following conditions: (1) It should do as little mischief as possible and not endanger any important vessels and nerves; (2) it should be free from difficulty in its performance; (3) it should permit free exposure to sight of all parts of the joint; (4) it should be applicable to every case in which resection of this joint is indicated. The method here proposed by the author consists in temporary resection of the outer third of the clavicle, this fragment of bone, together with the intact deltoid muscle and its circumflex nerve, being turned outward. By this method, which is free from danger, and suitable in all cases, especially in reduction of old anterior dislocation of the head of the humerus, the interior of the joint is freely exposed. The skin incision extends from a point in the neck about two inches above the junction of the middle with the other third of clavicle, downward over the interspace between the deltoid and pectoralis major muscles. After section of the clavicle it is necessary, in order to obtain free external rotation of the outer fragment, to divide the attachment of the trapezius, the subclavius, and the coraco-clavicular ligament. After resection of the joint the outer fragment of the clavicle is replaced and fixed in its normal relations by sutures.

Delayed Chloroform Poisoning.

H. G. Wells (*Journal of the American Medical Association*, Feb. 3, 1906) explains the late mortality after chloroform administration, to which attention has been called by Bevan and Favill and others, on the theory that chloroform, a protoplasmic poison, when in sufficient quantity in the blood, inhibits the proteolytic activities of certain of the cell enzymes while autolysis still goes on, and this, with the accumulation of toxic substances due to the impaired function of the degenerated liver and kidney, is the cause of the symptoms of late chloroform poisoning. Just what cell elements are selectively inhibited cannot be definitely stated,

but he believes that the oxidative ferments are chiefly involved. If the oxidases in the cell were destroyed or inhibited, we would see just the changes observed in chloroform poisoning, and we should look for the appearance of organic acids in the urine, such as we find in these cases. The liver is probably most affected because it is the most active organ in the autolytic and oxidative processes of the body.

The summary of his views is given by Wells as follows: "Chloroform poisoning in common with a number of closely related conditions characterized by intoxication and marked changes in the liver (acute yellow atrophy, phosphorus poisoning, certain septicemias, and some cases of puerperal eclampsia) probably all depend on the effect on the liver of poisons that destroy the synthetic functions of the liver cells without destroying their autolytic ferments. Autolysis of the liver cells follows, with resulting alterations in the liver structure, and the appearance of the products of autolysis (amido acids and various other organic acids) in the blood and urine. It is probable that in chloroform and in phosphorus poisoning, at least, it is the oxidizing enzymes that are particularly involved, accounting for the marked fatty changes that are present in these conditions."

Abscess (Pancreatic ?) of Lesser Peritoneal Cavity.

T. Pauchet (*British Medical Journal*, Feb. 24, 1905) reports a case in which a man, aged thirty-five, without any previous history of gastric disorder, was seized with violent pain and faintness, followed by vomiting and a rise of temperature to 100.5° for two or three days. At the end of that time a swelling developed in the epigastrium. Pleural friction sounds were audible, and there was dyspnea, with earthy complexion and extreme depression. Pauchet defined a tumor above the umbilicus, dull on percussion, and not fluctuating; there was resonance all around its limits, and the liver was separated from the mass by a resonant area, which proved to be the stomach. An incision was made above the umbilicus, exposing the stomach and the lesser omentum. On incising that peritoneal fold clear pus full of globules of grease and sloughy fragments came away. The pus smelled faint rather than fetid. The abscess wall was marsupialized and washed out with peroxide of hydrogen. A fistulous tract developed, from whence issued a fluid, which digested the skin. It closed completely in two months' time, a slight hernia of the cicatrix developing.

Paraffin Injections in the Tissues.

I. Kirschner (*Virchow's Archives,* No. 3) has demonstrated that paraffin after its injection into the tissues is not absorbed like catgut, neither does it become encapsulated like a foreign body. The connective tissue grows around and into the mass of paraffin, and the final result is an absorption of it. The organization of the paraffin proceeds with varying rapidity, probably owing to the different degree of pressure exerted on it by the surrounding tissue.

MEDICINE.

An Analytic Study of Uremia.

A. C. Croftan (*Journal of the American Medical Association,* Jan. 6, 1906) criticizes the current theories of uremia, showing that neither anuria nor the variations of excrementitious nitrogen output suffice to explain the phenomena. Only when we determine separately the various groups of nitrogen bodies that occur in the blood and urine do we find abnormal conditions that may be deemed fairly characteristic. The two most important of these are: (1) A relative increase of the ammonia salts, both of the blood and urine, as compared to normal average values, and as compared to the circulating and excrementitious urea. (2) A relative decrease of the urea, both of blood and urine, as compared to normal average values and to the total nitrogen of the circulating and excrementitious nitrogenous waste products. There may also be highly toxic albuminoid or alkaloid bodies in the blood or urine that might have an enormous effect without appreciably changing the amount or relative proportions of the nitrogen content. As regards the inorganic salts, the most delicate tests, Croftan states, give little evidence that uremia is due to salt retention. That there must be some poisons acting in the production of uremia cannot be denied. The decreased urea secretion, Croftan is inclined to think, is due rather to non-conformation than to retention. It is not increased in the blood, as it should be if it were not merely eliminated, and the corresponding increase of ammonia is normally converted into urea. Disturbances of the kidney and liver, Croftan states, often are seen to go hand in hand, and he believes this would be found much more frequently if the liver were examined as thoroughly as the kidneys in every case of Bright's disease that comes to autopsy, and if mild functional disorders of the liver

were as easily recognizable as like disorders of the kidney. Even if the kidneys primarily share the function of eliminating toxic matters some of the most important of these must pass through the liver before being finally eliminated by the kidneys. Even if the kidneys are primarily diseased, more work is thrown on the liver, not only in its disintoxicating function, but also in making up for the waste caused by a leaky kidney. The organ consequently becomes fatigued, its functions of disintegration of albumins is impaired, and less urea and more incompletely disassimilated intermediary products of albuminous metabolism are thrown into the circulation and intoxication results. Though this may thus follow or accompany renal disease, it is still due more to hepatic than to renal insufficiency. Hence the importance of recognizing early even mild degrees of hepatic insufficiency (particularly in renal cases and in pregnant women), and of safeguarding the patient against anything that may suddenly impose a strain on the fatigued liver.

Instead, therefore, of stimulating the kidneys, the chief object of treatment should be to prevent development of uremia by attention to those organs that threaten to fail. Croftan advises, first, rest for the liver, even starvation for a few days, and in any case complete elimination from the diet of all substances irritating to the organ, and that every effort should be made to reduce intestinal putrefaction to a minimum. He would follow this by mild stimulation, the carefully guarded use of salicylates, of bile acids, possibly of calomel, and such dietetic and physical means as are available, all under careful supervision. For the acute uremic attack the most sensible procedure, he says, is bloodletting, a lost art that should be revived in such cases as these. The injection of a saline to replace the lost fluid can do no harm, especially if some salt is injected that can stimulate the hepatic function—*e.g.*, salicylate of soda in normal salt solution, or a solution of sodium citrate or phosphate in proper molecular concentration. Symptomatically, he has seen good result from the use of such infusions.

The Pseudo-uremia of Childhood.

W. H. Birchmore (*Medical Record*, Jan. 27, 1906) gives some interesting facts in connection with this condition. The disease is rare and its symptoms misleading. In those cases which came under his immediate notice the diagnosis of uremia had been made by skilful physicians. All the cases began with

headache, and chill in the older patients, with spasms and crying fits in the younger ones, followed by a sleep or lethargy sufficiently alarming to require the attendance of a physician. The skin was dusky or bluish in tinge. The pulse averaged 59, with a temperature of 102.4° and 103.2° F. In all the cases the pupils were much contracted. Whatever the diversity of opinion in respect to the cause, the condition of the patient demanded prompt relief. A hypodermic injection of sulphate of atropine to stimulate the respiratory center was at once given, and one of strophanthin, in preference to digitalis, to steady the heart. The breathing improved as soon as the atropine began to take effect. When it was possible, an effervescing saline cathartic was given, the dose being repeated in half an hour if necessary; this was followed in every case first by an evacuation of the bowels, and secondly by a disappearance of all symptoms within ten hours. There are, no doubt, many other cases of indigestion or faulty digestion in which the poison which overpowers the respiratory center is produced in sufficient quantity to do serious mischief. The strong resemblance of the symptoms to muscarin poisoning is interesting. The hypodermic syringe is an invaluable aid in the treatment of these cases. Strychnine nitrate, strophanthin, and atropine appear to be the best therapeutic agents. The chief fear is that the respiratory center and the heart may give out.

Acute Yellow Atrophy of the Liver Following Eclampsia.

L. J. Roystea and C. R. Grandy (*Medical Record,* Jan. 6, 1906) describe a case of eclampsia in a young woman who had her first convulsion during labor and died two days later. For some time before her death she was markedly jaundiced, and the autopsy corroborated the diagnosis of acute yellow atrophy of the liver. The authors review the modern theories regarding the relationship of these diseases, and sum up their beliefs as to their identity as follows: (1) A toxemia is always the primary condition, but it may be severe enough only to produce the early symptoms—headache, lassitude, disturbances of vision, and a diminished excretion of urine and urea, with possible edema and albuminuria. In a few cases this stage has been followed by coma and death, without convulsions, the pathological findings being the same as in eclampsia. (2) In eclampsia (the second stage) the toxemia has become severe enough to interfere greatly with the functions of the liver and kidneys, and to produce the

nervous irritation made evident by the convulsions and coma. The severer poisoning here produces grave lesions in various organs, and often causes death. (3) In acute atrophy of the liver the changes have progressed still further and have practically destroyed this organ. We have added to the convulsions (which, however, do not necessarily occur) a deepening coma, an increasing jaundice, vomiting, and often purging, with blood in the stools, followed practically always by death.

Albuminuria in Nephritis and Bright's Disease.

A. Stengel (*Journal of the American Medical Association,* Jan. 6, 1906) calls attention to the fact that albuminuria is by no means always indicative of permanent nephritis or Bright's disease, unless it is considerable in amount and more or less constant in occurrence. He states that the nature of the accompanying tube casts must not be too greatly relied on to determine the seriousness of the renal lesion, and he states particularly that the occasional or even the frequent appearance of hyaline casts must not be regarded with too much apprehension. Modern methods of centrifugation increase the likelihood of finding casts. Even the definite hyaline cast, as distinguished from the insignificant cylindroids of the mildest grades of renal irritation, is also so frequent in cases of arteriosclerosis, cardiac or hepatic disease, and in gouty conditions, without serious kidney disorder, that its significance is comparatively trivial without general corroborative clinical symptoms. He does not underestimate the importance of urinary symptoms, but thinks that the meaning of a trace of albumin is often exaggerated, and that in case of suspected renal disease frequent examinations of the urine are required, and its constant or fluctuating condition should be taken into account.

The Milk Feeding of Infants.

Thos. S. Southworth (*Medical Record,* Jan. 13, 1906) says that an important problem in infant feeding has been the question of how milk whose composition and properties remain practically the same throughout lactation can be equally suitable for a digestion that is at birth feeble and at weaning able to care for adult foods. The explanation is that the milk itself is directly instrumental in developing the digestive tract through the changes in consistency of the curd caused by the alterations in the composition of the developing gastric juice. The infant's

first semisolid food is produced by the action of rennet alone; then hydrochloric acid and pepsin are secreted in larger and larger amounts, the effect of the acid being to cause the curds to become more and more solid, while the pepsin is provided to digest them. In this way the amount of work for the stomach keeps pace with gastric digestion.

The most suitable foreign milk to use for infant feeding is that of the cow, but the measures adopted to secure the digestion by the infant of a sufficient amount of the casein of cow's milk to maintain the tissues and promote growth will have to be decided by the physician for each individual infant, and the art of infant feeding as distinguished from the science of infant feeding is principally wrapped up in this one point. It is for the physician to determine whether he will make such addition to the milk that it will remain in a semifluid state; whether by the freer use of some alkaline antacid like bicarbonate of sodium he will completely neutralize the acid of the stomach and throw the digestion of the food into the intestine; whether he will use a gruel diluent to mechanically separate the milk curd; whether he will combine several of these measures; or whether, perchance, in cases of particularly difficult casein digestion, he will stop milk entirely and temporarily feed some substance which will not form a solid in the stomach.

New Quantitative Test for Acetone.

F. Bluth (*Deutsche med. Wochenschrift,* 3, 1906) introduces a test which is based on the delay in the change of color which is produced when the urine is treated with sodium nitrocyanide, sodium hydrate, and acetic acid. The more acetone present the slower will be the change in color. He claims for this test that it does away with distillation and titration; it takes from fifteen to thirty minutes, and is very accurate.

THERAPEUTICS.

Treatment of Constipation.

B. Buxbaum (*British Medical Journal,* March 10, 1906) in dealing with chronic constipation describes three varieties, the spastic, the atonic, and the partial, and considers that this clinical differentiation should form the basis of rational treatment. The spastic variety is most frequently met with, and has the most

unfavorable after-consequences. It is common to find it associated with nervous or neurasthenic troubles, or with mental disease; it is necessary to distinguish whether it is the cause or the result of disease before instituting treatment. In many cases it has been observed that it bears a definite relation to excitement, worry, grief, or mental strain, and that it is relieved by the removal of these disturbances. It is met with in renal colic and in diseases of the generative organs, and it is important to bear in mind its occurrence as the result of lead or nicotine poisoning and in arteriosclerosis; in the latter case it is particularly obstinate.

The treatment of such general causes is necessary for the relief of constipation not associated with disease; it is advisable to begin by regulating the diet. The regular use of a simple saline water is beneficial, and may be followed later by spa treatment; good results have been obtained from the ingestion of milk and Rhine wines and from a general improvement in nutrition. Constipation may be due to a diet which consists of material leaving little residue; the addition of vegetables to such a diet will often overcome an apparently obstinate constipation. It is best to order patients a mixed diet, comprising in some cases more fat-containing foods, in others more vegetables, and to impress upon all of them the importance of consuming plenty of water or other fluids. Injections of warm water or of oil are useful; their success in overcoming the spastic condition of the bowel is probably due as much to the heat as to the fluid, and should be combined with external applications. The author especially recommends the use of hot Carlsbad water for these injections, and prefers the knee-elbow position during the administration; olive oil is most readily injected in the form of an emulsion. He employs hot fomentations and hot bottles, or hot-water belts to the abdomen; a steam or hot-air bath is also effective in some cases, and the ordinary hot bath lasting from twenty to thirty minutes is not to be despised. Massage, if given, should be very light, its beneficial effect being somewhat doubtful; more benefit may be expected from the application of the galvanic current.

Atonic constipation is due to loss of muscular tone, and is often difficult to treat, and will require a far longer course of treatment. A diet which will excite peristalsis is essential. A purely flesh diet is so thoroughly absorbed that it leaves practically no residue, and a purely vegetable diet leaves a mass of residue which the already weakened intestine is unable to deal with successfully. It follows that a mixed and nourishing diet

will be the most suitable. In these cases means should be adopted to strengthen the muscles of the abdominal walls and of the intestine; cold sitz-baths lasting for five minutes, and followed by cold abdominal douches, if the patient can tolerate them, produce a reaction. Good results are claimed from the application of the ether spray to the abdomen. Light massage, gymnastic exercises, and the electrical current may also be tried for these patients; the cold sitz-bath followed by rectal faradization, lasting only a few minutes, appears to give the best result.

The Treatment of Impotency by Resection of the Vena Dorsalis Penis.

G. Frank Lydston (*International Journal of Surgery,* March, 1906) says that the resection of the vena dorsalis penis in the treatment of impotency is an operation requiring accurate anatomic knowledge, and cannot be done subcutaneously without serious danger of injury to important parts or total failure of the operation, even granting that it is practicable. The operation, while not essentially dangerous, is neither so simple nor so easily performed as has been claimed. The location of the dorsal vein is such that careful and painstaking dissection is necessary for its ligation or resection. The ligation of the superficial penile veins has often been performed by those who claimed that they had ligated the dorsal vein proper. This operation upon the superficial veins is often essential to a complete operation, but when performed alone is futile. The operation is beneficial in very many cases on strictly psychic grounds, but this does not militate against the advisability of its performance. The important thing for the patient is a restoration of function. In some cases of impotency of organic origin the operation is not to be thought of, but in quite a wide range of cases of the kind the operation is successful, first, because of its mechanical effect; secondly, because of its psychic effect.

One of the most important elements in the cure of impotency by a properly performed resection of the vena dorsalis penis is the demonstration of the dynamic capacity through purely mechanical circulatory agencies. The mechanical conditions thus secured are permanent in quite a large proportion of cases. In cases of complete impotency, which are not dependent upon irremediable local causes of functional disturbance of innervation, the operation is apparently successful in fully 50 per cent of the

cases, and beneficial in probably one-half of the remainder. In by far the majority of cases of impotency that come under the observation of the surgeon a trial of this operation is justifiable.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Trachoma in Children.

C. C. Bradley (*Medical Record,* Feb. 3, 1906) says that the soft follicular trachoma seen daily in New York schoolchildren is often very difficult to distinguish from follicular conjunctivitis. His rule is to classify as follicular conjunctivitis those cases in which the follicles are limited to the lower lids. In these cases they are lightly scattered over the lids in rows and are superficial. When, however, these same benign follicles appear on the upper lids, even without deep infiltration of the conjunctival tissue, the case should be classed as trachoma. Cases that respond to mild astringents in a short time, or to fresh air, better food, and to relief from errors of refraction, are cases of follicular conjunctivitis. Where there is doubt, it is safer to separate and isolate. Later, the hypertrophy and consequent shrinking of the conjunctiva will surely appear if it is a true case. In discussing the treatment he says that the general use of sulphate of copper is not altogether harmless, as it may lead to serious cicatricial contractions. The use of one-per-cent solution of bichloride of mercury is harmless, and is equally good in its curative results as sulphate of copper. Copper citrate is apparently harmless, and is devoid of the objectionable features of copper sulphate. General anesthesia is unnecessary in the operation of expression. Cocaine hydrochlorate applied in solid form, about two grains to each eye, answers every requirement and obviates the necessity of a hurried operation, with its frequent extensive laceration of lid tissue.

Eye Problems.

R. J. Tivnen (*New York Medical Journal,* March 24, 1906) says that ocular findings are of distinct diagnostic and prognostic value in systemic diseases. The clinical ocular manifestations observed in nephritis, diabetes, locomotor ataxia, syphilis, and

rheumatism amply warrant this conclusion. Foreign bodies in the cornea are frequently the source of serious disease of the eye. Infection may be introduced, and ulcer, with its grave consequences, develop. Antiseptic measures in their removal are to be strictly observed. Iritis, conjunctivitis, and sclerotitis may be confused in diagnosis. Care in distinguishing the distinct clinical manifestations of each will prevent the error. Glaucoma may be diagnosticated as sick-headache, persistent neuralgia, erysipelas, influenza, or toothache. In all such cases the tension of the eyeball is the correct guide. The use of cocaine and atropine is not free from danger. Toxic symptoms may be produced. Contraindications for use of atropine are distinct, and tension should previously be estimated. Squint in children should be treated early. The usual order of treatment followed is: (*a*) Correction of refractive errors; (*b*) training of fusion sense; (*c*) surgical measures. Errors of refraction underlie the majority of cases, and proper fitting of glasses may be all that is required.

GYNECOLOGY AND OBSTETRICS.

Pernicious Vomiting of Pregnancy.

J. W. Williams (*Bulletin of the Johns Hopkins Hospital,* March 1, 1906) says that the pernicious vomiting of pregnancy is not due to a single etiological factor, and occurs as one of three varieties—reflex, neurotic, and toxemic. The reflex type is dependent upon the existence of abnormalities of the generative tract or ovum, and may be cured by their correction or removal. The neurotic type is dependent upon the existence of a neurosis without demonstrable lesions, and is more or less allied to hysteria. It is the most frequent variety of serious vomiting, and can be cured by suggestion or a modified rest cure. The toxemic type is associated with characteristic changes in metabolism, and in fatal cases, at least, with lesions in the liver analogous to those observed in acute yellow atrophy. It may occur in an acute or chronic form, the former causing death in ten days or less, while the latter may persist for weeks or even months. In reflex and neurotic vomiting there are no manifest changes in the urine, while the toxemic variety is characterized by a marked decrease in the amount excreted as ammonia, the so-called ammonia coefficient rising from 3 to 5 per cent to as high as 46 per cent in one of the cases. The toxemic type is diagnosticated by the examination of the urine, the reflex by careful bimanual examination of

the genitalia, and the neurotic after the exclusion of the other two varieties. The prognosis is excellent in reflex and neurotic vomiting, provided appropriate treatment is instituted, so that the termination of pregnancy is rarely indicated. In toxemic vomiting, on the other hand, a fatal issue can be averted only by the prompt induction of abortion, and even then the prognosis is dubious.

Ruptured Ectopic Pregnancy Complicated with Appendicitis.

B. F. Stevens (*American Medicine,* Jan. 6, 1906) briefly reviews the literature, and notes relatively few cases reported. He reports a case of ruptured ovarian pregnancy with characteristic symptoms and findings in which rupture occurred into the folds of the broad ligaments, producing moderate shock and almost hemorrhage. Several weeks later the patient had an attack of appendicitis, which subsided under the starvation treatment, but recurred again several times upon the ingestion of solid food. Operation disclosed an uninfected hematoma the size of a lemon, and an acutely inflamed and adherent appendix, which had a fibrous constriction at about the middle of its lumen, the distal portion being distended with the muco-pus. There was some question before operation as to whether the latter attacks were due to an inflamed appendix or to an infected hematoma.

Puerperal Infection.

Ellice McDonald (*American Medicine,* Feb. 17, 1906) reviews the lesions of puerperal infection and directs attention to the three forms infection may take—toxemia, septicemia, or pyemia. The frequency of the various infecting organisms is considered and the subject of sapremia is reviewed. Six cases illustrative of the more unusual terminal forms of puerperal infection are reported. The cases are discussed separately, and general conclusions are deduced that while the streptococcus is the most common infecting organism, other types of infection not infrequently cause severe symptoms. The term puerperal infection should be broadened to include infection elsewhere than in the uterus, and the nature and location of such lesions should be recognized before any operative measures are undertaken. The harmfulness of curettement is dwelt upon.

Decidual Cells in the Cervix Uteri in Intracorporal Pregnancy.

A. Blumberg (*British Gynecological Journal,* February, 1906) found decidual transformations of mucous membrane in two cases of intra-uterine pregnancy: in one in the stroma of polypi removed from the cervix; in the other, in the stroma of tissue excised from the eroded posterior lip of the cervix. This decidual transformation of the cells of the cervical mucosa he holds to be a special instance of decidual cell metamorphosis met with in many situations far from the embedded ovum, and especially associated with a deeply-seated placenta.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
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The Psychoses of Heart Disease.

In the *Journal of the American Medical Association* of October 28, 1905, Wm. House divides the psychoses of heart disease, from the standpoint of etiology, into:

1. Local sensations usually not painful, whereby the patient becomes aware of some cardiac abnormality, as in palpitation, irregularity, tachycardia, bradycardia, or excessive loudness.

2. Local pain, as in angina pectoris, endocarditis, pericarditis, or compression from pericardial effusion.

3. Disturbances in circulation: (*a*) Vasomotor constrictions; (*b*) feebleness of heart's action with cyanosis.

4. Secondary lesions in the brain: (*a*) Embolism from valve lesions; (*b*) edemas and effusions from incompetency.

According to symptoms they might be divided into:

1. States of fear and apprehension, usually accompanied by more or less panic, and alternating with some depression and irritability, without being accompanied by active delusions or hallucination.

2. Delusions founded on misinterpretations of local cardiac phenomena, such as pain.

3. Active hallucinations and delusions from circulatory disturbances involving sensory organs.

4. Dementias from secondary lesions in the brain. And he cites illustrative cases.

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ORIGINAL CONTRIBUTIONS.

PARESIS.

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The writer's apology for saying anything on so familiar a theme as paresis is the increasing frequency of the disease, its insidiousness in the first stages, and the importance to the general practitioner of its early diagnosis. The disease has many synonyms, the most common of which are paresis, general paresis, general paresis of the insane, paretic dementia, progressive paralysis of the insane, paralytic dementia. The word paresis is often loosely used by laymen, who have been so accustomed to its frequent appearance in the newspapers as to somewhat irrelevantly apply it. It is important that the general practitioner should not fall into this error.

The history of its discovery, the views of those who were the first to recognize its most striking symptoms, and the subsequent modification of many of these earlier impressions are quite interesting. In the early part of the nineteenth century a few French writers began to recognize certain prominent symptoms occurring with such regularity as to lead them to feel that a hitherto unrecognized disease had been differentiated. Delaye and Calmeil, in 1824 and 1826, regarded it as a paralysis superimposed upon an attack of insanity. Bayle, in 1822, thought the disease a distinct entity. His views gained ground, and for years paresis has been regarded as a specific disease involving the brain, not infrequently the spinal cord, and attended with certain definite mental changes. It is interesting to note that the dual theory which prevailed at the time of the first recognition of paresis, and then was lost sight of for years, is now, in the light of modern investigation, receiving stronger support again. These dualists claim that there is a *paralytic dementia*

and a *paralytic insanity*—that is, there is a special type of insanity called *paresis,* and there is a form of general paralysis of the muscular system associated with more or less dementia; in other words, paresis has been regarded by writers both as a distinct form as well as a complication of insanity. It is interesting to note that a general muscular paresis may exist for years without mental disturbance. The general practitioner may see this, but is not as likely to see the typical general paralysis of the insane, as these cases get into hospitals for the insane and are soon lost to his view. The existence of these occasional cases of muscular paresis with little or no mental impairment strongly favors the dual theory and aids in the solution of many obscure cases. Such cases are undoubtedly due to the extent and location of the cerebral area involved.

Paresis may be defined to be a chronic progressive degenerative disease of the brain and spinal cord. There is slow progressive paresis of the muscles of the entire body, which begins with the muscles of the face and throat, and finally involves all the muscles in tremor and enfeeblement. If the spinal cord is involved there is marked ataxia and paresis of the lower extremities. There is progressive mental failure terminating in complete dementia.

The etiology comprises *predisposing* and *exciting* causes. Among predisposing causes the following are important:

1. *Race.* The disease is rare in the tropics. It occurs with greatest frequency in the Anglo-Saxon, German, and French races. The Swedes and Norwegians are singularly exempt. The Irish and Scotch are remarkably free in their own countries and in rural districts, but are susceptible as soon as they live in cities. This is particularly true of the Irish, who are frequently the victims of this disease in the cities of England and America. The negro, formerly exempt from the disease while in slavery, is now quite free when living in the country, but very susceptible when transferred to large cities.

2. *Temperament.* The excitable, emotional, so-called nervous, and the sanguine temperaments as a rule seem more predisposed than the phlegmatic.

3. *Sex.* Men are markedly more predisposed than women. The disease invades social strata in the following order: (1) Men of the lower classes; (2) men of the upper classes; (3) women of the lower classes; (4) women of the upper classes.

Habits, mode of living, as well as stress and environment, have much to do with this order of invasion.

4. *Age.* The period of life most susceptible to paresis is unquestionably that of the greatest functional brain activity, the period when the ambitions of life as well as the passions and appetites are strongest, and when the struggles for success and supremacy are the fiercest. The disease rarely occurs in childhood, and seldom after sixty. Those reported as occurring after sixty are most likely cases of senile degeneration with symptoms simulating those of paresis.

5. *Heredity.* The disease is not inherited *per se,* but the diminished resistance is inherited, so that when the stress or the exciting cause is applied, these weaker brain structures are more likely to succumb. My experience has been to the effect that heredity plays a very small part in the etiology.

6. Urban life is certainly one of the most marked of the predisposing causes. Life in a large city may mean overcrowding, poor sanitation, underfeeding, working beyond physical strength, excessive brain work, all sorts of sexual, alcoholic, and food excesses, the fiercest competition and rivalry attended as they are with elation and depression of spirits. It is certainly very suggestive that those races leading the most quiet and indolent life, like the men of the tropics, rarely have paresis. The nearer man approaches aboriginal conditions, like the Esquimaux and the North American Indian, the less susceptible he becomes to the disease, even though the life involves a strenuous physical conflict with nature and enemies. Paresis is unknown among these races. It is remarkable that in a state of slavery the negro never was subject to paresis, but under the stress of urban life and personal responsibility he becomes a ready victim. The Irishman in Ireland rarely suffers from the disease, but in the hospitals for the insane in this country the Celt living in the larger cities is almost as frequent a sufferer as the Anglo-Saxon.

The Exciting Causes.—No one cause alone can produce this disease in all probability. Overwork, strain, mental anxiety, especially if met with excessive alcoholic stimulation, is the etiological combination most likely to develop paresis in the individual temperamentally predisposed. We must never forget the prominent part played by inherited brain and nerve resistance. One person may succumb to causes that are inoperable in another —just as phthisis, influenza, and other diseases find their most ready victims among the constitutionally predisposed.

The most important of the exciting causes are: (1) Alcoholic excess; (2) venereal excess; (3) syphilis. To these may be added as secondary in importance, though operable in con-

junction with the three exciting causes and the predisposing causes already enumerated, overwork and excessive nervous strain and traumatism.

1. *Alcoholic excess.* Unquestionably, alcoholic excess is the most potent etiological factor in the disease.

In the large majority of cases there is a history of quite steady indulgence. Paresis and alcoholism are often liable to be mistaken for one another, so closely do the symptoms of one simulate those of the other. Men who work hard, and stimulate to excess in their hours of relaxation, or who meet the nervous strain with alcoholic stimulation, are very apt to succumb to this disease.

2. *Venereal excess.* The question as to whether mere sexual excess without venereal infection can produce paresis is often raised. Some writers, like Sankey and Maudsly, have said that this may be the sole cause, but the general consensus of medical opinion is that it is only active as an etiological factor when taken in conjunction with alcoholic excesses and moral causes, such as overwork. Mickle calls attention to the fact that the age of greatest sexual excess, between 20 and 30, and the period at which paresis is most prevalent, between 30 and 55, do not coincide. We must not infer that the erotic tendencies which are frequently among the earliest symptoms of the disease are necessarily the cause of paresis. It is true that many paretics have been addicted to excessive sexual indulgence prior to their attack, but it is questionable whether such excesses without the other etiological factors would have alone induced the disease.

3. *Syphilis.* There is a tendency, particularly among German writers, to regard syphilis as the sole cause of paresis. Paresis and locomotor ataxia have been regarded as identical disease processes, both due to syphilis, the one invading the cord and the other the brain. Cases of paresis terminating at a later period with marked ataxic symptoms, and ataxia culminating finally in true paresis, certainly seem to favor the identity of the pathological process. It is difficult to explain pathologically the relationship between syphilis and paresis. With the exception of those cases in which syphilis can be definitely established, about all that we are justified in saying is that a person who has paresis has been so loose in his sexual relations that he has in all probability exposed himself to the disease. It rarely occurs that an individual living a correct moral life has paresis.

Chase has well said that "the pathological processes of syphilitic brain disease and paresis are different. In syphilis there

are changes in the blood-vessels, and the formation of gummata or diffuse meningeal infiltration. The first and third occur about the base of the brain, while the second is more apt to appear in the cortical region. On the other hand, in general paresis there is a chronic meningitis of the convexity, with atrophy of the cortex." There seems to be, therefore, difference both in the character and the location of the pathological processes in syphilis and paresis. About all that we are justified in saying is that syphilis produces general nutritional disturbance and degenerative changes within the central nervous system, and when this disease exists in one who is expending all his surplus force in exhaustive work, whether mental or physical, such a person is more likely than any other to fall a victim to paresis. We see many paretics among those who have had syphilis; we see many who present no such history, and we see many who, though they do not present any history of syphilis, have certainly exposed themselves to that disease. Another suggestive fact is that antisyphilitic treatment is of no avail whatever in the treatment of paresis.

Symptomatology.—For convenience the disease has been divided into four periods. As in all other diseases, one cannot be too arbitrary in such divisions, for one stage glides almost imperceptibly into another. These periods have been distinguished as follows: (1) The prodromal; (2) the first stage of the established disease; (3) the second stage of the established disease; (4) the third stage of the established disease.

1. *The prodromal stage* has also been called the medicolegal period, because of the partially diminished responsibility of the patient and his liability to commit acts involving his arrest and subsequent adjudication. The early recognition of this period by the general practitioner is of great importance, because of the many unhappy complications for both the patient and his family that may arise. At this stage of the disease the mental aberration may be so slight as scarcely to be noticed by any but the nearest relatives, and sometimes is even overlooked by them. Slight exhilaration with unwonted egoism, unusual loquacity, alterations in character, are some of the striking features of the prodromal stage. The most subtle and troublesome of these earlier symptoms are the failure in judgment and the moral lapse by which the individual, while appearing perfectly well in many respects, still shows his inability to transact business with his accustomed keenness, or by some overt act discloses his loss of conception of the proprieties of life. This latter symptom is

of quite frequent occurrence. A man of the most correct manners may take articles in a store or elsewhere that do not belong to him; he may make improper advances to or even assault a lady; and these acts may be the first and only outward symptom manifested. It is extremely important that the disease should be recognized at this period by the general practitioner in order that the reputation of the man and his family may be saved. At this stage of the disease the patient may give away his money foolishly, and through an erroneous estimate of true values may buy and sell so injudiciously as to squander his property. In any one of these instances, should the person prove to be a victim of paresis he is utterly irresponsible, and the early detection of the disease is extremely important.

This prodromal period may last for a few months or it may cover many years, but usually it is of short duration. Close examination discloses many abnormalities that are so slight as to almost elude detection, and yet are important as disclosing the beginnings of a grave disease. There is apt to be slight failure of memory, and especially an inability to hold the attention to accustomed pursuits. In this stage there may be neuralgia of head and extremities, vasomotor disturbances, as shown in flashes of heat, flushing of face, and the like. There may be a change in pupilary and knee reflexes, with no other physical symptom present. As a rule, the reflexes are exaggerated at this period. There may also be occasional lapses of consciousness, apoplectiform attacks out of a clear sky, as it were. Ordinarily, consciousness is so disturbed that the individual has no realization of any of these abnormalities of sensation or conduct. Occasionally, however, the patient will realize the slight failure of memory, the inability to hold the attention, the neuralgic pains, and speak of them to the physician, but ordinarily he is oblivious to these beginning defects.

Among the most striking of these earliest phenomena are the fibrillary twitchings of the tongue and the upper lip and corners of the mouth. When led to suspect paresis in the prodromal stage always examine carefully for exaggerated deep reflexes, for inequality of pupils, the fibrillary tremor just noticed, and beginning slight changes in character. At this stage the commencing difficulty of articulation, the flushed cheek, the exhilaration, may suggest intoxication. Its duration, the character of the reflexes, and the mental attitude from day to day are usually sufficiently marked to establish the diagnosis. Berkely has well said: "When a man in early middle life comes before us, who

has shown a recent alteration in his whole character, restlessness, irritability, together with utter indifference to the needs of others and pronounced egoism, and when on examination we can demonstrate the presence of pupilary anomalies and abnormalities in the deep reflexes, we are fairly safe in concluding that we have to deal with a paretic." There is no other disease so likely to induce these first slight subtle changes in character as paresis. Indifference to the things that have usually been considered of importance is a prominent diagnostic symptom of the premonitory stage.

2. *First stage of the established disease.* At this period all doubts as to the presence of a grave disease are dispelled. The patient no longer commits an occasional egregious act, but his follies are so numerous as to attract the attention of every one with whom he comes in contact. He may buy or sell foolishly. He sees unreal values in property owned or desired. His judgment as to actual value is so defective, his egoism so extreme, that he places an extraordinary valuation upon property owned by him, or is willing to pay an extravagant price for articles of comparatively little worth. Elation is the rule in this stage of the disease. Formerly it was the custom to regard this excessive egoism and expansion of the feelings as a diagnostic symptom. But as our knowledge of the character of paresis and its pathology has advanced, we no longer regard this elation as an absolutely constant symptom. Sometimes the patient at this stage becomes actively maniacal, again depressed or hypochondriacal, and occasionally the more characteristic delusions of persecution or paranoiac insanity prevail. The motor symptoms of paresis at this period are the constant and diagnostic features of the disease. The mental stage, while usually one of expansiveness, may vary from mania to depression and persistent delusion, but the muscular paresis is the one constant and progressive feature, and in cases of doubt, owing to the varying character of the mental state, determines the diagnosis.

The muscular tremor is now pronounced; the articulation is more imperfect. Occasionally the volubility and elation proceed faster than the paresis, and then the diagnosis from simple mania may be difficult. The diagnosis is important, for mania with elation is usually a very recoverable disease, while paresis is incurable. In mania there is not likely to be the inequality of the pupils and the fibrillary tremor of the tongue, and as a rule the moral fiber of the patient is not much changed. In the first stage of paresis there is rarely much disturbance of the gait, but

the knee-jerks are pronouncedly exaggerated. The muscular symptoms are still confined to tremor of the tongue and mouth, which is very much more marked than in the prodromal stage.

3. *Second stage of the established disease.* In this stage all symptoms, mental and physical, are more marked. If the patient was maniacal during the first stage he becomes quieter and less aggressive in the second stage. The dementia becomes more pronounced, so that whatever may have been the mental condition in the first stage, maniacal, deluded, or depressed, it is now less active. Confused and sluggish ideation succeeds the more definite and active ideation of the first period. Manual dexterity is lost. A mechanic cannot handle his tools with his accustomed skill, the surgeon loses his precision, the handwriting becomes tremulous and uneven, the gait becomes irregular and oftentimes ataxic, the patient oftentimes balancing himself as he stands, or walking in a labored manner. Gluttony is the rule. During the first stage the patient loses flesh, but in the second stage often grows very stout. The muscles are flabby. Apoplectiform and epileptiform seizures are apt to occur, but are no longer of diagnostic value, owing to the presence of other more marked signs. These seizures often abruptly terminate the second stage, precipitating the patient at once into the third and last stage of the disease. The speech is now extremely uncertain, articulation is very imperfect. Ideation is confused and flighty, and conversation irrelevant. In this stage there is apt to be persistent inequality of the pupils and a sluggish reaction to light. The knee-jerks usually disappear.

4. *Third stage of the established disease.* In this stage the dementia is profound. Ideation is almost *nil.* Muscular paresis is extreme. The patient articulates with the greatest difficulty. Owing to the weakness of the muscles of deglutition, choking is liable to occur. The gait becomes more and more helpless, until at last he is bedridden. Automatic repetition of words and sounds indicates the almost complete suspension of the higher brain. Tooth-grinding is oftentimes a striking symptom at this period and an evidence of automatism. Owing to the impairment of the trophic nerves bed-sores are apt to form. The patient at last becomes a vegetative automaton with little or no semblance of intelligence. The deep reflexes are lost.

In the natural history of paresis one symptom deserves especial emphasis, viz., the *remissions,* which occasionally completely obscure the case for months or even years. It is well for the general practitioner to be familiar with the fact that a patient

who has had marked paretic symptoms may suddenly seem to entirely recover. This recovery is oftener apparent rather than real, and yet is extremely deceptive. One case within my experience, after remaining at the State Hospital for many months with manifest symptoms of paresis, had a remarkable remission, during which he was elected mayor of a city, holding the position for a year, but relapsing later, and finally dying of the disease. The fact that remarkable remissions are of not infrequent occurrence should lead the general practitioner to express a very guarded prognosis in any case that has presented the well known symptoms of paresis, from which there has been apparent recovery. These so-called recoveries are apt to be followed by a relapse later. And especially should the practitioner be extremely cautious about advising such individuals to assume their customary work, for the relapse may occur so suddenly as to embarrass the physician, and may even lead to financial losses or other unfortunate complications.

Diagnosis.—Uncomplicated paresis is comparatively easy of diagnosis. Symptoms follow each other with such regularity and precision that the picture is unmistakable. Not infrequently, however, the very slow progress of the disease, the remarkable remissions, the presence of one group of symptoms and the absence of others so complicate the case as to render it almost impossible to make a positive diagnosis, even though one feels quite sure. Many conditions simulate paresis, but the most important are the following:

1. Alcoholic pseudoparesis.
2. Mania with expansive delirium.
3. Dementia following organic brain affection, such as embolism, thrombosis, apoplexy, and that more universal condition of advancing years, arteriosclerosis.

1. *Alcoholism* with its train of marked symptoms may closely simulate paresis. Any case of marked excessive alcoholic indulgence presenting some exhilaration and more or less motor disturbance must be closely studied by the general practitioner before expressing a positive diagnosis. It is wise to withhold a definite statement as to the disease and its prognosis until a few weeks have elapsed. As a rule, the paretic will present more marked fibrillary tremor of the tongue and oral region, more aggravated knee reflexes with ataxic tendencies than the subject of alcoholism, whose muscular tremor will be general rather than localized. The alcoholic is more likely to present delusions of fear and suspicion, with their accompanying hallucinations, than the paretic. When

to these symptoms are added the possible inequality of the pupils and the characteristic numbing of the moral sense so frequent in paresis, there is not much likelihood of mistaking pure alcoholism for paresis after the lapse of two or three weeks. Paresis, moreover, is not apt to develop before thirty nor after fifty-five years of age, while alcoholism may develop at any age upon excessive indulgence. The alcoholic is more liable to be fussily nervous, indulging in many rather aimless and confused movements, most of which rapidly subside upon proper treatment.

2. *Mania with expansive delusions.* Here again it is often extremely difficult to make a positive diagnosis until the patient has been carefully watched for a while. Usually the paretic will show a more slowly developing change in disposition and character. He is more easily diverted from one set of ideas to another. In his rapid speech there is apt to be an occasional slurring of certain words, a stumbling speech and articulation at times. His muscular movements lack the positive character of those of the simple maniac, and disclose the beginning of the muscular paresis which becomes so prominent a feature a little later. If able to write, the omission of occasional letters is frequent. If the pupils are unequal in conjunction with these enumerated symptoms, the diagnosis is more likely to be paresis than mania.

3. *Dementia following some organic brain affection.* In dementia the patient is more childish, his ideas lack the definition of those of the early paretic, the memory is more impaired than in the first stages of paresis. Among the motor disturbances incoördination characterizes the paretic disease process, while in dementia following structural brain decay paralysis, usually local and slowly progressive, or terminating in more or less permanent contractions, is the rule. In his speech the dement usually has a thick, imperfect utterance, due to palsy of the muscles of articulation, while in the paretic the tremulous, uncertain pronunciation is due to incoördination in these same muscles.

Pathology.—This is not the place, nor does space admit of the discussion of the pathology of this interesting disease. It is merely necessary to call attention to the fact that paresis involves the blood-vessels, the neuroglia and the nerve cells of the cerebral cortex, and not infrequently of the medulla and spinal cord. Occasionally the starting-point of the disease process is the cord, but ordinarily the brain is the first to suffer. Hence the intelligence usually is affected quite early. Inasmuch as the cerebral cortex is the focal starting-point of the disease, the highest, latest evolved, and consequently least stable of the mental

attributes suffer first. The judgment, the moral perception, and that indefinable but easily recognized mental characteristic known as *common sense,* disclose a weakening often quite calamitous to the patient and all immediately connected with him. It is the early decay of those higher mental attributes so essential to happiness and success in life that renders the diagnosis and proper management of this terrible disease so important.

Treatment.—A word merely in conclusion as to treatment. Once fairly established paresis is undoubtedly incurable. Long remissions suggest recovery, but are apt to be deceptive. The one important thing to bear in mind is the early restraint of the patient and the removal from active work and the careful regulation of his diet and habits. No disease requires more careful management than paresis in its incipient stage. Not only are all symptoms aggravated by continuance of the ordinary avocations and habits, but results fraught with evil to the patient and his family are apt to occur if the individual is not removed from his ordinary environment and closely supervised in his daily life. Medicines are of minor importance as compared with judicious management.

THE EVILS OF COCAINE.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Cocaine is as much more dangerous and enthralling than morphine as the latter drug is more dangerous and enthralling than alcohol (Kerr). While cocaine is peerless for good, its power for evil must not be overlooked, if one would conserve the best interests of those to whom its administration may seem advisable.

Several years ago a foreign medical periodical[1] sounded an appropriate alarm concerning the rapid spread of the cocaine habit in England, where it threatened to become the third scourge of humanity, alcohol and morphine being the first and second. All ranks of society were declared to be crowded with its victims (both men and women), many of whom were literary people who took cocaine to stimulate their imaginations.

On this side of the water the cocaine habit among certain classes has spread with even greater rapidity, and in the light afforded by accumulated evidence these statements seem reasonable: (1) That of all narcotics cocaine is the most alluring, exciting, insidious, and dangerous; (2) that among all classes of

[1] *British Medical Journal.*

people cocaine ebriety is progressively extending; (3) that the majority of its victims remain unrecognized until as a result of some outbreak of violence its tragic manifestations are brought to light; (4) that for many reasons the laws which assume to govern and regulate the sale of poisonous drugs appear inadequate or ineffective when applied to cocaine; (5) that both physicians and pharmacists are in a measure responsible for the spread of cocaine ebriety, (*a*) because of the freedom and frequency with which the drug is prescribed for alleviation of various real or imaginary maladies, (*b*) the ease with which repeated "refill" of such prescriptions may be obtained.

The effects of a moderate dose of cocaine (¼ to ½ grain) sniffed into the nostrils, of a larger quantity hypodermically, or still more taken per os, are mental exhilaration, physical well-being, and muscular strength. After three or four doses, at intervals of half an hour to an hour, all these phenomena rapidly increase; the mental excitement becomes intense, the pupils are dilated, the throat and lips become dry, respiration deep, heart action rapid; the brain works under "high-pressure," thoughts and words follow each other with lightning rapidity; sleep and food alike appear totally unnecessary adjuncts to human existence.

While the wakefulness which accompanies and follows the ingestion of cocaine at first appears pleasant, as the stimulating and exhilarating effects subside an intense weariness supervenes, insomnia becomes almost intolerant and mental suffering unmeasurable. Under continued use of the drug temperament is materially modified, the victim becomes idle, unclean, selfish, and neglectful; in short, disturbances are induced which closely resemble those of the later stages of morphinism.

Bose[1] says the first symptom experienced by the victim after taking a dose of cocaine is loss of sensation of the tongue and lips followed by dryness of the mouth and fauces. The approach of the so-called hilarity is announced by a feeling of heaviness of the head, throbbing of the arteries of the neck, and palpitation of the heart. The pulse becomes slightly full and quick, but never exceeds 110. At this stage the victim would like to be left alone; he firmly closes his lips and avoids talking to friends, lest in his attempt to do so saliva flows from his mouth. His ears become hot and red, cheeks pale, tip of the nose cold; perspiration soon breaks out on the forehead and neck, and the maximum amount of hilarity is marked by coldness of the finger ends and dilatation of the pupils. This stage lasts from thirty to forty-

[1] *Indian Medical Gazette.*

five minutes, after which the victim longs for a fresh dose, and unless obtained at once he feels lifeless and dejected. This depression of spirits is more imaginary than real; no fall of temperature nor slowness of pulse is noticeable, but respiration becomes slightly hurried. The tongue and lips become again moist, and perspiration on the forehead ceases, but the pupils remain dilated.[2]

The teeth and tongue of confirmed cocaine habitués are said to turn jet-black, probably due to the chemical change produced by the action of lime and saliva upon the cocaine.

The tendency to increase the dose becomes irresistibly great. Unlike opium it brings on insomnia and anorexia, soon followed by dyspepsia and diarrhea. The dyspepsia of cocaine ebriety is very obstinate, not yielding readily to any method of treatment.

The prolonged use of cocaine induces deafness; the quantity of urine is diminished, but albumin is rarely found present therein. Delusions and hallucinations frequently disturb mental tranquillity of the cocaine inebriate, and he is gradually made most miserable. In some cases acute mania develops, which is not usually amenable to any form of treatment.

According to the *Indian Medical Gazette,* besides the use of cocaine hydrochlorate as a therapeutic agent, its consumption as a drug for intoxication is so great in the Calcutta market that unless stringent measures be forthwith adopted to control its sale there is reason to fear its demoralizing effects will soon spread amongst the juvenile members of respectable families, and at no distant date special asylums will be required for the safety and treatment of cocaine inebriates.

Cocaine acts chiefly upon the central nervous system, first stimulating, then paralyzing; the peripheral blood-vessels are contracted, and under its use there is at first increased mental and bodily vigor, which speedily gives way to intense mental depression, anorexia, hallucinations, and complete breaking down of the mind (insanity), with volitional palsy and inhibitory prostration, all taking place in a much shorter time than the mental degeneration and physical decadence of alcoholism—in fact in most instances requiring only as many weeks as alcoholic ebriety demands years.

The peculiar overwhelming danger of cocaine addiction undoubtedly lies in the fact of the comparative absence of immediate after-effects. There is said to be no unpleasant taste in the mouth next day; no dry tongue; no nausea or vomiting; no

[2]It is believed this will be found untrue in a certain percentage of cases. —Q. W. H.

headache; the pleasurable flow of happiness, which seems to have left "no sting behind," has indeed been a "rose without a thorn." Thus deadly to all that is noblest and manly, to all that is "lovely and of good report" in human kind, this speediest of brain disturbers threatens to excel all other mind poisons in its fell sway over the intellect and conscience of man (Kerr).

Careful and painstaking inquiry elicits the significant fact that the strictly medical use of cocaine is not markedly increasing, hence it is clear that the enormously increased demand for this drug represents its illegitimate use; and this view is sustained by the frequency with which cocaine habitués are encountered in hospitals, asylums, and before legal tribunals. It is reported that at one time over forty victims of the cocaine habit, induced largely by the use of popular preparations such as catarrh cures, etc., were presented before courts of justice in Chicago within a period of two months.

Crothers[1] believes cocaine users are usually past thirty years of age, and that most of them have previously been morphine or alcohol habitués; that the criminal classes who use cocaine are markedly increasing, especially in all large cities. The peculiarity about the drug is that it produces at first but a slight degree of exaltation, accompanied by a sense of comfort and agreeable bodily activity. The hypnotic effect is not prominent, and there is no headache, nausea, or mental confusion the next day. After a time the mental exaltation merges into slight hallucinations and delusions. The senses are acute, thoughts flow with great rapidity; vague impressions of fear and danger supervene, but not sharply defined as in the delirium of alcohol; later these phenomena increase and may assume a peculiar form in each case. There may be fear of contamination and disease, of intrigues and losses from others, or sudden intense delirium of love, hate, or revenge, associated with marked physical changes referable to the skin, hands, heart, and digestive system, profuse swelling and attacks of dyspnea, often tonic and clonic disturbances and great feebleness; but the peculiar mental hallucinations and delusions of strength are marked in all instances.

Norris[2] after a thorough study of this subject concludes: (1) Cocainism is the most insidious of all drug habits, its use being unaccompanied by disagreeable after-effects (headache, vomiting, etc.), which occur after the ingestion of opium or alcohol; the vice is readily and rapidly established. (2) Cocainism is

[1] *Philadelphia Medical Journal.*
[2] *Philadelphia Medical Journal.*

occasionally acquired by the local use of the drug in diseases of the nose and throat, teeth, etc., but more often as a substitute for opium or alcohol. (3) Cocaine is eventually tolerated by the system in large doses (one case is recorded in which sixty grains daily was consumed). (4) A relatively large number of habitués are found in the medical and dental professions (it is said thirty per cent). (5) The continued indulgence in cocaine invariably, and generally soon, leads to marasmus, with mental, moral, and nervous degeneration. (6) The smallest fatal dose on record is one-third grain hypodermically.

Another observer says he is aware of an instance where a cocaine habitué took regularly ninety grains of the drug per diem; and yet in another one-seventh of a grain was sufficient to cause speedy death of a healthy, robust man. There have been relatively few fatal cases reported, and the majority of such resulted from large doses injected into the urethra and bladder—*e.g.*, in two instances five and six fluidrachms respectively of a five-per-cent solution of cocaine thrown into the urethra caused death.

It is believed that one hundred grains of cocaine daily, said to have been taken regularly for several months, represents the largest dosage on record. This case was reported by Boggess,[1] an epitome of which may be permissible as a matter of reference. He was called to see a young woman who was supposed to have taken an overdose of cocaine. She was delirious, and it was ascertained that she had taken thirty grains of cocaine (method not stated) at one dose. Further inquiry developed the fact that she had been taking one hundred grains of the drug per day, and that this quantity had been consumed daily for several months. Another case of cocaine addiction (also a female) was referred to by the author at the same time (amount taken per day not mentioned), and in both the habit was attributed to the same cause, viz., the use of a nasal spray containing cocaine ordered by a specialist. Both patients showed rapid mental degeneration, and one of them committed suicide shortly after the case was recorded.

Loewenberg[2] relates two cases of young women having serious toxic symptoms (insomnia, visual and auditory disturbances, anorexia, gastralgic pains, and nervous manifestations), the origin of which was a snuff powder containing cocaine pre-

[1] *American Therapist.*
[2] *Bulletin Med.*

scribed for rhinitis. And it is surprising to note that so eminent an authority as Bosworth has advocated the placing of a two-per-cent solution of cocaine in the hands of patients to be used as a nasal spray!

It appears that the cocaine habit among Southern negroes has become alarmingly prevalent. It was found that the drug enabled them to perform more easily the extraordinarily severe work of loading and unloading steamboats, etc., and the high wages offered by Mississippi River steamboat owners for the unloading of cargoes are said to have first prompted the negroes to use cocaine as a stimulant. They soon became aware that they could work for seventy hours at a stretch in rain, in cold, or in heat, when under the influence of cocaine.[1]

"Certain catarrh compounds in the market depend for their heralded virtues upon the proportion of contained cocaine, and the result is that many cocaine habitués have been made. A mere lad (aged fourteen) was advised to employ a certain proprietary remedy for catarrh, with the result that he was soon using two or three boxes per week, which exhausted all his meager salary. Then he began to pilfer, and finally forged his employer's name in order to secure a supply. Result: one ruined youth, a dishonored name, a heartbroken mother. . . . . Drugs containing excessive proportions of morphine, of cantharides, and of cocaine are widely heralded as 'sure cures' for a multitude of maladies. . . . Recently sad cases of cocaine addiction have come under our notice as the result of using catarrh powders containing cocaine or solutions of this fell drug for relief of disorders affecting the nasal and respiratory passages. . . . One most estimable medical gentleman has twice entered a retreat in order to be relieved of cocaine addiction, and yet the temptation was so great that he found himself unable to resist the snare of this most potent and seductive drug."[2]

According to the *New York Medical Journal,* the sale of cocaine in Minnesota is to be regulated under a bill recently introduced in the legislature of that State. This bill provides that cocaine may be sold at retail only by pharmacists, and at wholesale only to pharmacists. Druggists may sell cocaine only on the written prescription of a physician or dentist, and such pre-

[1]The writer believes that the extensive use of cocaine among the male negro population is confined within extremely narrow limits, for reasons suggested by Martin, *loc. cit.*

[2]Excerpt from editorial in the MEDICAL AGE.

scription may be filled only once. It is also provided that any patent medicine or other mixture containing cocaine must bear a label stating that fact in the English language. Violation of the act is made a misdemeanor, punishable by a fine between $50 and $100, or imprisonment from thirty days to one year.

If the writer is not misinformed laws somewhat similar to the one proposed in Minnesota have already been enacted in several of the States, but it appears that enforcement thereof is rarely or never realized. It is stated that any one, even a mere child, is permitted to purchase cocaine in any quantity at nine out of every ten drug stores, especially in the larger cities.

Numerous eminent authorities have never ceased to contend that the cocaine inebriate, the morphinomaniac, and the chronic alcoholic are irresponsible individuals, and should be so regarded both by the physician and the jurist. Reasoning purely *a posteriori,* it would appear that this view is entitled to some measure of credence, but the plea of irresponsibility (insanity) is too frequently suggested, and thus apparently made an excuse for the commission of various and sundry crimes. There appears no adequate reason why at least the cocaine inebriate should not be held strictly responsible and accountable for his acts.

Not long ago a peculiarly brutal crime was committed by a male cocaine habitué in a city not many miles distant. While walking over a high viaduct he met a little girl and her baby brother, and without any warning he seized the little girl and hurled her over the railing to the rocks about seventy feet below, where she lay bleeding and unconscious until found by a workman attracted to the scene by the cries of the deserted baby brother about half an hour later. She was taken home, and under the best medical treatment obtainable hovered between life and death for several weeks, but finally rallied and was able to identify her assailant. It is said she will at least partially recover.

The perpetrator of this dastardly crime was promptly lodged behind the bars, be it said to the everlasting credit of the activity and efficiency of the police department of the city in which the act was committed, and whether the little victim eventually recovers or not it is hoped nothing will interfere with prompt and adequate punishment of the offender. However, the plea of insanity (irresponsibility), due to overindulgence of cocaine, has already been entered by the defense, and a contingency may be thereby induced which the prosecution will likely find it difficult to overcome.

This is an illustration of only one of the evils of cocaine, an unpardonable crime committed while under its influence. It seems unnecessary to recite others of similar nature. If prompt justice commensurate with the gravity of the crime could be meted out to a few of the offenders under such circumstances, the results to humanity might be wholesome and beneficial.

In August, 1908, the University of Jena will celebrate the 350th anniversary of its foundation. A school of criminology has been founded in Madrid, and, it is hoped, will shortly be in working order.

The sixteenth meeting of the Congress of French and French-speaking alienists and neurologists will be held this year at Lille, August 1 to 7, under the presidency of Professor Grasset, of Montpellier. The following reports will be presented and discussed: The cytological, bacteriological, and experimental study of the blood in the insane, by Dr. M. Dide, of Rennes; the senile brain, by Dr. A. Leri, of Paris; the responsibility of hysterical persons, by Dr. R. Leroy, of Evreux. Communications relative to the Congress should be addressed to the general secretary, Dr. G. Chocreaux, Médecin Chef en de l'Asile Publique d'Alienees de Bailleal (Nord).

A bill has been introduced into the legislature of British Columbia in response to 3600 petitioners to regulate the sale of patent medicines in that province, says the *Journal of the American Medical Association*. It is the largest signed petition ever presented to the British Columbian legislature, and shows that the people of the Pacific province are getting alive to the evils of the unrestricted and promiscuous manufacture and sale of these dangerous nostrums. It provides that all "patent medicines" for internal use which contain chloral hydrate, ergot, morphine, opium, belladonna, or their compounds, cocaine, acetanilide, or sulphuric, nitric, or kindred acids, must contain a label of poison on the package or bottle, with the name and percentage of the poison and the ingredients. No "patent medicines" under the provisions of this bill may contain more than 10 per cent of alcohol except under permission of the provincial board of health. Penalties for violation are attached to the bill.

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EDITORIAL ARTICLES.

THE PURPOSE OF THE PHYSICIAN.

Some interesting reflections are made by the *British Medical Journal* and also by the *Spectator* on certain recent proposals by American legislators. The States of Iowa and Ohio have both had proposals submitted them, whereby the putting out of existence of persons suffering from painful, incurable disease would be made legal. While, of course, in a healthy-minded community there is no danger of such proposals being adopted, it is nevertheless interesting to discuss the underlying motive of such legislation.

Our English contemporary, considering the arguments for euthanasia, asks why these proposals are made in the stage of civilization reached by the modern state. It concludes that they have their origin in the brains of "neurotic intellectuals who cannot bear the thought of pain," and that they are the outcome of a degeneracy which is the product of a high civilization. This may be so, if fear of pain be the motive of such legislation. The fear of pain is undoubtedly a symptom of degeneracy; when one cannot live or perform an act the doing of which involves pain, that is degeneracy. The sickly sentimentalism which would end life because it is painful indicates an emotional temperament decidedly hyperesthetic, the product of a luxurious civilization.

It is suggested that there is an even uglier motive behind this proposal for legalizing euthanasia. It is that of a pitiless utilitarianism. It is never the man who is suffering intolerable pain that craves this kind of a remedy. It is the cold cynic, the utilitarian legislator, who works to save the expense of maintaining the helpless, who makes this demand. He is not even the possessor of the high-strung emotional temperament which

may be classed among pathological phenomena—he has not even that excuse.

The attitude of the medical profession to all these schemes for euthanasia, killing the helpless, castrating the criminal, or suffocating the idiot, must always be the same. The physician would become a monster were he to become a public executioner. His power and usefulness would be gone were he once to lose his transcendent occupation of prolonging life at all times and in all conditions by every known and conceivable method.

EDITORIAL NOTES.

The Biograph in Medicine.

A writer in an eastern contemporary describes the pictures he was enabled to take of epileptic seizures by means of a moving picture machine. Some patients of the Craig Colony were placed at his disposal, and he biographed twenty-one seizures, including one case of status epilepticus. The photographic details were marvelous. Pictures were also secured of a rare case of double nystagmus, in which the movements of the eye were clearly seen. A group of rhythmic idiots were pictured, each with his individual motion and keeping time to music. Certain of the photographs taken showed convulsive stages in which the very action of the muscles could be studied. This method of illustration will undoubtedly play a large part in the future teaching of medicine. It opens up a vast field which has as yet been but little utilized.

Poor Economy.

The recent revelations in regard to the mismanagement of the great life insurance companies have made it incumbent upon them, owing to the immense loss of new business, to make retrenchments in various directions. The one department of these companies against which not a word has been said is the medical one. The medical directors have received very modest salaries in comparison to the other high officials, and the various medical examiners' fees have always been low. Life insurance to be safe must have the very best risks obtainable, as any company that admits any and all applicants without a careful and thorough medical examination will soon come to grief. Notwithstanding the low fees that medical examiners have received in the past, rarely if ever has an instance come to light where an examiner

allowed himself to be bribed by an agent into allowing a poor risk to pass. Now when trouble comes to these companies the first thing they do is to reduce all medical fees for examinations 40 per cent or more. As a result many of the most competent examiners will resign, and their places will be filled by inferior men. This reduction of the fee can act in but one way, and that is that medical examiners will not give time or attention to making as thorough an examination for three dollars as they did for five. As a purely selfish business proposition, it would seem best to continue the old rate if as good service is to be expected in the future as was given in the past.

Lack of Surgeons in the Navy.

Again does the Navy Department find itself in need of young medical men to fill existing vacancies in its medical corps. It seems hard to understand why it is so difficult to find enough qualified young physicians to make up the present deficiency, for certainly the navy offers an interesting and honorable career for the recent graduate in medicine. True, in the past the service was not attractive owing to the inferior rank accorded a physician on his entrance. This condition, however, does not obtain at the present time. We understand that there will shortly be established in Boston, San Francisco, Philadelphia, and Brooklyn four new examining boards to supplement the regular one at Washington. It is hoped by this means to obtain enough applicants to fill up the naval complement, which is at present thirty surgeons short.

Infant Life Protection.

An interesting exhibition dealing with the question of infant life protection was recently held in Berlin. The exhibition was a scientific as well as a popular one, and had for its object the instruction of the public, especially young mothers. Among the many features of the exhibition there were shown graphic curves of the weight of children reared on natural and on artificial food respectively. One department had for its subject the care of infants in families. Model nurseries were shown, together with sterilizing instruments, milk bottles, etc. In all there was a wealth of interesting material. As the care of infants is a subject of deep interest, especially among the poorer classes, who have little or no means for obtaining knowledge, such exhibitions ought to be held from time to time in all large cities, as they would have a decided tendency to reduce infant mortality.

ITEMS AND NOTES.

The corner-stone of the Ellen Osborn Hospital at Taylor and Maffit Avenues, St. Louis, was laid on April 1.

On April 4 Governor Stokes of New Jersey signed the bill substituting electrocution for hanging after March 1, 1906.

Dr. Nicholas Senn, of Chicago, was recently elected an honorary member of the Imperial Royal Medical Society of Vienna.

The bill appropriating $70,000 yearly for five years for the purpose of exterminating mosquitoes in the New Jersey marshes was passed on March 21.

The Pekin Board of Education, in an endeavor to stop the practice of foot binding, has issued an edict prohibiting the sale of the special shoes used by the victims of the measure.

The Fiske Fund Prize of $250 for the best dissertation on "The Complications of Gonorrhea in Both Sexes" has been awarded to W. Louis Chapman, M.D., of Providence, R. I.

The third annual meeting of the Philippine Islands Medical Association was held at Manila from February 28 to March 3, 1906. The programme, which included twenty-two titles, was varied and interesting.

The Austrian Antiquackery Society has decided to send a representative to any place in lower Austria to lecture on the advantages of vaccination when a wish to that effect is expressed by a local practitioner.

It is announced that Professor von Recklinghausen, who has been head of the Pathological Institute of the University of Strassburg since it was constituted a German university, will retire at the end of the current semester. The distinguished pathologist is in his seventy-third year.

For the sleeping sickness there is no remedy, declared Professor Koch in a recent lecture on his return from a journey of investigation in Africa. He hoped, however, that the infection might be ended by the extermination of the insect (which propagates slowly), by burning the undergrowth at its favorite home.

THE Chicago Tuberculosis Institute was incorporated March 19 by Dr. Arnold C. Klebs, Dr. Henry B. Favill, and Edward B. Bicknell, says the *Journal of the American Medical Association*. The organization will rent a building, establish a free dispensary, collect statistics, and carry on an active educational campaign. Dr. Frank Billings is president of the institute, and Dr. Henry B. Favill chairman of the board of trustees.

THE national quarantine bill was passed by the House April 3. The bill places the control of all quarantine stations, grounds, and anchorages under the Secretary of the Treasury, and directs that he shall select suitable places for them and establish the same at such points on or near the seacoast of the United States and on the Mexican border, in order to prevent the introduction of yellow fever into the United States.

How to dust a room is explained in a card issued by the New York Charity Organization Society's Committee on the Prevention of Tuberculosis. One should not use a feather duster, because this does not remove the dust from the room, but only brushes it into the air, so that it is inhaled; or the dust settles, and the work must be done over again. Soft, dry cloths should be used, which are shaken out of the window, or slightly moistened cloths, which may be rinsed out in water after using them.

AN anonymous donor has contributed $25,000 to the New York Association for Improving the Condition of the Poor, to aid in the building fund for the first American Seaside Hospital for Crippled Children. The hospital is to be built as soon as the association has secured the necessary $250,000, toward which sum John D. Rockefeller has given $125,000, with a proviso that the entire amount must be raised before July 1. During the past week the association has also received contributions amounting to $30,000 from seven other donors.

THE importation of opium except for medicinal purposes has been prohibited in all the Australian states. The Chinese are the chief customers for the drug in that part of the world, where the drug is grown locally, some twenty-eight tons having been produced in a year. These prohibitions, following upon the Transvaal enactment, are a decided triumph for the Anti-Opium Society. There will be some loss of revenue; Queensland alone has derived some $50,000 a year from this traffic. The gain, however, is worth the sacrifice.

The prevalence of chicken-pox and smallpox during the past few winter seasons has brought to light an important oversight regarding the public health, says *American Medicine*. A mail clerk was recently taken from his work with a suspicious eruption, and it was learned that there was no regulation in the postal service requiring employees to be vaccinated. Further inquiry discloses that it is the policy of the postal authorities not to interfere with public health matters, but to leave such details entirely to local health boards. It is possible that the wide-spread dissemination of smallpox during the last few years may have been assisted by infected mails.

The King of Italy recently received in private audience Professor Postempski, medical inspector of the Red Cross of Italy, who presented to His Majesty the first copy of his report on the antimalarial campaign in the Roman Campagna in 1905. In the first campaign, which was undertaken in 1900, no medicinal prophylaxis was used, the proportion of cases among the population being 31 per cent. In the second campaign (1901), when quinine was given prophylactically, the proportion fell to 26 per cent; in 1904 to 10 per cent; and in 1905 to 5.1 per cent. The King expressed the greatest satisfaction at the good results of the efforts of the Red Cross Society.

The number of students at the German universities was not less than 42,390 in the past winter, as compared with 39,716 in the previous year and 29,117 in 1895. The increases in the number of students at four of the larger universities have been as follows during the last ten years: Berlin, from 5345 to 8081 students; Munich, from 2865 to 5147; Leipsic, from 3288 to 4224; and Bonn, from 1070 to 2908. The other universities also show a considerable increase, with the exception of that of Würzburg, where 1368 students were registered in 1895 and 1354 in 1905, and in that of Greifswald, where the students in the other faculties have more than doubled since 1895, the number of medical students (and of Protestant theology likewise) has considerably decreased, the respective numbers being 7725 and 6032.

The first number of *La Bulgarie Medicale*, which is edited by Dr. Chr. Doctoroff, director of the Sofia Institute for Combating Infectious Diseases, has recently appeared. In a note at the commencement it is remarked that it is quite a mistake to suppose that because there is no medical faculty in the university

the medical literature of Bulgaria must be valueless. All the 700 medical practitioners distributed throughout the country have been educated at foreign universities, and are quite able to make full use of the invaluable clinical material to which their practice introduces them. Owing, however, partly to the fact that the Bulgarian language is almost unknown abroad, and partly to the difficulty of obtaining facilities for publishing medical works, Bulgarian medical literature has never taken the place to which it may fairly aspire.

THE constant fall in the number of medical students which was a marked feature of the Austrian University reports for the last seven years has ceased, and is now replaced by a rising tendency. According to the figures published by the Ministry of Education, in the winter semester of 1905-06, which terminated in March, there were 3133 students matriculated in all the seven medical universities of Austria, being an increase of 141 students as compared with the figures for the preceding year. The chief cause of this increase is the fact that a large number of foreign students and ladies have attended the courses. The number of graduates taking the degree of M.D., with which the medical curriculum is finished, is still constantly declining, not only on account of the reduced number of medical aspirants but also because medical study is being relinquished by more young men than formerly for the sake of civil service appointments or commerce.

AMONG the members of the medical profession in foreign countries who have recently died are Dr. Constant Vernet, chief physician of the men's department in the Lunatic Asylum of Mareville, aged fifty-three; Dr. Otto Wanscher, extraordinary professor of surgery in the University of Copenhagen; Dr. Phisalix, assistant to the chair of comparative pathology (Professor Chauveau) at the Paris Natural History Museum, aged fifty; Dr. Paul Stolper, professor of forensic medicine in the University of Göttingen, aged forty; Dr. H. F. von Hoelder, of Stuttgart, widely known as an anthropologist, aged eighty-eight; Dr. Ignaz Kraus, one of the best known physicians of Carlsbad; Dr. N. Ljubinoff, professor of pathological anatomy in the University of Kasan; and Dr. Marduel, one of the founders of the *Lyon Médicale,* to which he was for many years a constant contributor, and a prominent figure in the professional life of Lyons, in his sixty-fifth year.

NEW PUBLICATIONS.

NERVOUS AND MENTAL DISEASES.

A fifth edition in seven years speaks well for the popularity of this text-book by Archibald Church, of Chicago, who writes the major portion, that concerning nervous diseases, and Frederick Peterson, of New York, who writes the section upon mental diseases.

A careful comparison of this new (fifth) edition with the first edition (1899) shows the very painstaking revision to which the whole has been subjected. Scrupulous attention has been paid to rearrangement of minor subjects, where that seems best, to the insertion of new plates, the addition of new tables, and frequent amplification of the text. Even the English descriptive of the diseases considered shows here and there the nicety of the scholar's touch, and delightfully attests the thoroughness with which all has been revamped.

The section on mental diseases shows less change than the rest, but here, too, the author wishes to, and does, say some things new. Other editions since the first have contained the valuable review by Meyer of recent psychiatrical problems, which is here reprinted.

The author bows in a limited way to the sway of the influence of Kraepelin upon modern psychiatry, and interpolates a chapter of 2½ pages upon Manic-depressive Insanity, at the same time retaining his former chapter upon Mania, and protesting that it hardly seems as yet clear that it is wise to accept all of Kraepelin's views with reference to this form of insanity. He seems to accept with less reserve Kraepelin's classification of dementia precox, and adds a short chapter upon this subject. With the further exception of the printing of Kraepelin's classification in full, this section stands practically as first written.

The style of the work is clear and attractive, and the whole betokens careful scholarship and such a thorough knowledge of the subject as to make the book of great value to both student and practitioner.

Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Mental and Nervous Diseases in the Northwestern University Medical School, Chicago, etc., etc., and Frederick Peterson, M.D., President of the State Commission in Lunacy, New York. With 341 Illustrations. Fifth Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders & Company. Pp. 937. In cloth, $5.00 net; in sheep or half morocco, $6.00 net.

TEST-DIET IN INTESTINAL DISEASES.

The application of the test-diet to the elucidation of intestinal diseases forms the subject of Professor Schmidt's monograph which has been translated for the American reader by Dr. C. D. Aaron. The work is one which will instruct the practitioner, in a simple and practical manner, in the mode of conducting examinations of the feces. The manual is one which will repay perusal.

The Examination of the Function of the Intestines by Means of the Test-diet. By Prof. Dr. Adolf Schmidt. Authorized Translation by C. D. Aaron, M.D. The F. A. Davis Co., Publishers, Philadelphia.

NOTE.—In our issue of April 10, the publication of the book "Science and Religion" was erroneously attributed to D. Appleton & Co., for which we express regret. The book in question was issued by Fowler & Wells, New York.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Observations on Nephroptosis and Nephropexy.

A. Sturmdorf (*Medical Record,* Jan. 13, 1906) considers that vices of skeletal conformation play an important part in the production of nephroptosis. Omitting theoretical considerations, he says, normal kidney support may be practically defined as the resultant of two essential factors—a retaining pressure of adequate intensity and a receptacle of accurate conformation. The retaining pressure is exerted by the normal tension of the general peritoneal sac applied to the anterior kidney surface in the manner of an inflated cushion, propping the organ against its receptacle. This pressure is reflexly regulated by the activity of the abdominal muscles. The receptacles applied to the posterior kidney surface are formed by the declivity existing on each side of the anterior aspect of the lower dorsal and upper lumbar spine. They are funnel-shaped recesses, narrow below in the male, more cylindrical and shallow in women, a peculiarity more marked on the right side, and appearing with the broadening of the pelvis at the advent of puberty. Deviations in the conformation of these receptacles from the lines of the posterior kidney surface constitute the main predisposing factor in the production of nephroptosis. The causes of such deviations are embraced in the whole category of congenital and acquired skeletal abnormalities. The treatment should, therefore, in many cases have been begun in the developmental period of the osseous framework. The restoration of normal internal as well as normal external conformations should be our orthopedic aim; the organic and functional spinal deviations of early life, the infantile paralyses, the muscular and ligamentous insufficiencies, should receive consideration from the point of normal internal as well as external topography. Much is being accomplished in the correction of external skeletal abnormalities; much may be accomplished by attention to the visceral displacements induced by such abnormalities. Kidney dislocation once developed, nothing short of surgical fixation will reëstablish its normal stability. Palliative treatment undoubtedly yields results, but of temporary duration.

Surgical Hints.

The April number of the *International Journal of Surgery* contains the following hints:

In septic conditions of uncertain origin, the presence of localized pain will sometimes afford a clue to the portal of infection. To operate and find that a suspected osteomyelitis is actually an acute rheumatism is far preferable to deferring operation until an exact diagnosis can be made. A condition sometimes simulating inguinal hernia is the protrusion of masses of fat through the canal in front of the peritoneum. If this fat be later absorbed a true hernia may result, owing to the dilated condition of the canal which remains. Fecal fistula, if uncomplicated, small, and situated in the vicinity of the ileocecal valve, will often close spontaneously. Operation should therefore be postponed until it seems certain that a cure cannot be hoped for by nature's unaided efforts. The possibility of urethral stricture in young children suffering from urinary disturbances (frequent micturition, vesical tenesmus, retention of urine, etc.) should always be considered even in the absence of a traumatic cause or gonorrheal infection. Internal urethrotomy followed by systematic dilatation is as successful in these cases as in older persons. An excellent ointment for the treatment of boils is that recommended by Bulkley. It consists of carbolic acid, 5 to 10 grains; fluid extract of ergot, 1 to 2 drachms; starch, 2 drachms; zinc oxide, 2 drachms; and ung. aquæ rosæ, 2 ounces. It is spread upon the center of a moderately thick layer of absorbent cotton, several times the size of the inflamed area, and secured with strips of adhesive plaster. This dressing can be left on for ten or twelve hours.

Endothelial Tumors.

F. R. Zeit (*Journal of the American Medical Association*, Feb. 24, 1906) remarks on the confusion that exists in the nomenclature and diagnosis of endothelial tumors, and points out the need of a better system. A correct diagnosis is of the greatest practical value, since these tumors are slower in growth than other malignant growths and do not produce metastases or involve neighboring lymph nodes as early; hence the prognosis after thorough removal is better than with carcinoma or sarcoma. He gives the reasons for accepting endothelial tumors as a special class by themselves, and points out the biologic and morphologic

differences between them and carcinoma and sarcoma. The general morphologic characteristics of endothelioma distinguishing it from carcinoma are stated; the intimate connection of the cells with the stroma, the intercellular cement substance, the fibrillary processes, the arrangement of the cells, etc., also the organoid as distinguished from the histoid structure of sarcoma. Cases are reported illustrating the special morphologic characteristics of the various types of endothelial tumors, according as the endothelial proliferation originates from lymph vessels or spaces, or from the outer or inner endothelial lining of the blood-vessels. Other endothelial tumors, such as cylindroma, resulting from hyaline metamorphosis of the vessel wall, and psammoma and cholesteatoma, usually classified under this head, are briefly mentioned but not discussed.

Laminectomy and Section of Nerve Roots in Neuralgia.

A. Oehler (*British Medical Journal,* March 10, 1906) proposes a method of relieving the severe pain caused by the pressure of enlarged axillary and supraclavicular glands in cases of recurrent or no longer operable cancer of the breast by exposure and section of the posterior roots of the brachial plexus. A case is reported in which laminectomy was produced on the four lower cervical and the first dorsal vertebræ, and followed by incision of the dura and division of the posterior roots of the fifth and three following cervical nerves and of the first dorsal nerve. The results in this case were not satisfactory, as though much relief was afforded, some pain persisted in the arm and hand, and after an interval of ten days the upper extremity became completely paralyzed, in consequence probably of increased swelling in the axilla. Seventeen days after the date of operation the patient died from pulmonary embolism. The author, however, is so far satisfied with the results of his treatment that he recommends its adoption under like conditions.

Chronic Urethritis and an Improved Method of Applying Medication to the Urethra.

E. G. Ballenger (*American Medicine,* March 3, 1906) says the worst complication that is likely to follow a chronic urethritis is a stricture, consequently this should be borne in mind during the entire treatment. The pathology is essentially a chronic inflammation of the subepithelial tissue (especially around the

follicles), which passes through two stages, that of infiltration and that of contraction. The most rational method of forestalling a stricture is by the treatment of these conditions with the medicated sounds. The ointment may be massaged into the follicles and depressions, where the germs are protected from irrigations and injections. The exudation thrown out around these follicles is frequently the starting-point of a stricture. No other single treatment combines so many beneficial factors—*i.e.*, dilatation, cold, massage, and medication uniformly applied to the entire membrane and depressions. The extensive nervous connection and the wide-spread symptoms that result from injury or disease of the prostatic urethra justify its being called the solar plexus of the pelvis, and many vague indefinite pains, symptoms, and sexual weakness may often be relieved by the proper medication of this part of the urethral canal.

An Inexpensive Mechanical Treatment for Anterior Metatarsalgia.

E. B. Young (*Boston Medical and Surgical Journal,* Feb. 29, 1906) recommends the following method for relief from anterior metatarsalgia: A piece of sole leather of the thickness required is cut into the shape of a tongue. The edges are beveled, and the leather is touched on one side with a few drops of liquid glue. It is then placed on the sole of the shoe, to which it adheres in the required position—*i.e.*, so that its pressure is exerted just behind the heads of the metatarsal bones. The situation in which it gives relief is marked with pencil, and the leather nailed in position by a shoemaker. It can also be inserted under the sole by raising the posterior edge of the sole and nailing it again in place. If there is too much pressure the leather is pared to the requisite thickness, as indicated by the comfort of the wearer. There are also manufactured leather and rubber buttons, which are to be screwed to the bottom of the shoe, but they are not so firm, and distributing the pressure over a smaller area are less comfortable than the leather tongue.

Congenital Malformation of the Heart.

Aller G. Ellis (*American Medicine,* Feb. 17, 1906) reports fifty cases of malformation of the heart, four of which are described at length. One is a case of the rare condition of pec-

toral heart with divided sternum; the child was a full-term male and lived 23½ hours. The second case is one of transposition of the aorta and pulmonary artery, the child living thirty-four days. The third and fourth cases are instances of perforate interventricular septum and absence of anterior portion of auricular septum, respectively. Illustrations of the four specimens are given.

Iodine-benzine Disinfection of the Skin.

Heusner (*Centralblatt für Chirurgie,* No. 7, 1906) introduces a new method of disinfecting the hands and skin for surgical operations. A 1:1000 solution of iodide in benzine is used in the place of hot water, alcohol, and bichloride. About 300 cubic centimeters of the iodine solution is poured into a basin and the hands scrubbed with a brush for five minutes; they are then rinsed in a fresh basin of the solution, wiped dry with a piece of gauze, and rubbed with a 2:1000 iodized vaselin.

MEDICINE.

The Problem of Psychiatry in the Functional Psychoses.

E. Cowles (*American Medicine,* Feb. 10, 1906) enters into a lengthy discussion of this subject. He says that a discussion of the thesis that the problem of psychiatry is in the functional psychoses requires first an examination of the terms and conditions of the problem. This necessitates an inquiry concerning certain principles and conclusions of the biologic and medical sciences that have had a controlling influence in psychiatry. Morphologic conceptions being dominant in medicine, it will be found that a number of terms and phrases are so commonly employed in medicine that their use has been compelled in psychiatry, although they embody conceptions and theories inconsistent with its dependence upon functional conceptions of mental pathology.

The inquiry had led Dr. Cowles to the conclusion that the physiology of the life-process is the first recourse for psychiatry in the search for explaining principles, and therefore it becomes necessary to be emancipated from all preconceptions. The functional conceptions, being framed, and applied consistently with the facts of physiology and psychology, lead to a recognition of

the developmental and genetic character of the functional modifications, and indicate their sources in physiologic facts. The dependence of all functional phenomena upon the processes of nutrition and metabolism for the maintenance of the nervous and mental mechanisms points to the fundamental importance of pathologic physiology and chemistry. Physiologic examination of functional modifications shown in symptoms helps to determine the physiologic sources of the contributing disorders in the whole body as well as the central nervous system. The psychiatrist inclined to inquiry finds in the pursuance of his practical work that as a physician he must treat the whole body, and that a functional conception of mental diseases leads to treatment. Psychiatry belongs to general medicine, and mental disease, like bodily disease, is not an entity nor an agency, but the result of normal function acting under abnormal conditions; the problem requires the investigation of the developmental and genetic character of functional modifications.

Scarlatinal Nephritis.

This most important complication of scarlet fever, its etiology and prophylaxis, is discussed by H. Lowenburg (*Journal of the American Medical Association,* Feb. 17, 1906). In scarlet fever, he states, the function of the skin is almost completely suppressed, thus overtaxing the kidneys, which are also called on to carry off the toxic agent of the disease. There seems to be evidence that this last alone may be sufficient to produce the kidney disorder without the usual clinical manifestations of scarlatina. Constipation, diet, and exposure to cold are all-important contributory factors, the last mostly in susceptible and anemic patients. For prevention, Lowenburg would insist on good ventilation and constant, carefully regulated temperature (68° to 70° F.), a milk diet varied toward the close of the disease, with tender vegetables, fruits, and farinaceous substances cautiously added. Fruit juices are refreshing and help to lessen urinary acidity. Daily urinary examinations should be made, especially after each change of diet, and on any appearance of albumin a return to an absolute milk diet should be made at once.

Hydrotherapy is mentioned as the one chief remedy. The free use of water aids in elimination of toxins, and it should be given as regularly as food. If plain water cannot readily be taken, some of the mineral waters may be used, or better lem n-

ade or orangeade, to each pint of which a teaspoonful of cream of tartar may be added. A daily bath with friction is a valuable adjunct in promoting the skin functions, and its temperature should never be lower than 8 or 10 degrees below that of the patient. Enteroclysis is also of use; from 1 to 8 ounces of saline solution may be given once or twice a day. The only drugs of any value in preventing renal complications are alkalies and laxatives. Lowenburg would give 5- or 10-grain doses of acetate or citrate of potassium. Minute doses of calomel should be given at intervals of three or four days during the disease, followed by broken doses of magnesium sulphate. The use of antistreptococcus serum is mentioned, and authorities favoring it are quoted, but without special recommendations.

Effect of Posture on Cardiac and Vascular Murmurs.

R. D. Rudolf (*American Medicine*, March 3, 1906) calls attention to the marked effects of posture upon cardiac and vascular murmurs, some of these only being present in certain postures, while others are louder in one position than in another. Thus the venous hum, heard in the root of the neck in cases of anemia and various conditions of lowered vasomotor tone, is often only audible when the patient is vertical, while the arterial bruit is often only heard when he is recumbent. As regards cardiac murmurs, it may be generally stated that all systolic ones, if altered at all by posture, are louder in the recumbent than in other postures. Murmurs occurring at parts of the cardiac cycle other than the ventricular systole, if altered at all by posture, are louder in the vertical than in other positions. The murmurs chiefly affected by changes in posture are the so-called "functional" ones, which are always systolic, and the chief one of which occurs in the second and third intercostal spaces close to the sternum, but posture often has considerable influence upon those due to organic disease.

The manner in which posture effects these changes is discussed, and the conclusion is reached that the results are brought about chiefly through the influence of gravity. Dr. Rudolf urges that in every case in which it is considered necessary to auscultate the heart or vessels, this examination should be conducted in both the recumbent and vertical postures, and says that in the description of any heart murmur it should always be stated what postures the patient was examined in, when the murmurs were of the nature described.

Exophthalmic Goitre.

George Dock's (*American Medicine,* Feb. 24, 1906) observations are based on thirty-two hospital cases observed in the course of ten years; twenty-nine were women, three men. The predisposing causes could rarely be discovered. In twelve, previous diseases or nervous shock were noted a short time before the characteristic symptoms. In these cases goitre was the first symptom, but in twelve others there was goitre observed from three to thirty-seven years before the other symptoms came on. The thyroid gland was enlarged in all cases. In twenty-six a systolic murmur was audible over the thyroid. Tachycardia was present in all but two cases, and in one of these had been present before the observations began. Observations on the blood-pressure showed striking differences. In some the pressure was high, up to 180 millimeters. Eye symptoms were absent in only three cases. Emaciation was a marked and striking symptom, in two cases amounting to almost or quite half the body weight. Diminution of hydrochloric acid in the stomach was observed in a number of cases, but hypermotility was often associated with this. Two of the patients died—one from complicating disease, the other with acute symptoms. Of the other cases, a number had chronic courses up to fifteen years. Emphasis is laid on the importance of the early diagnosis. Regarding treatment, rest is considered most important, with systematic treatment. Experiences with some of the organic preparations and Roentgen rays are mentioned. Surgical treatment is recommended, with certain limitations.

Asthma.

James R. Arneill (*American Medicine,* Feb. 10, 1906) gives the deductions drawn from the study, treatment, and observation of a number of cases of asthma. He was impressed with the fact that we are frequently deceived in regard to the recovery of our patients, because we do not take the trouble to trace their ultimate history. If we did we would find many of them in the hands of osteopaths, Eddyites, and venders of patent medicines. Patients often improve for a short time after consulting new physicians, osteopaths, and Eddyites, but if followed up will again be found in the hands of regular physicians or treating themselves. We are prone to make a simple diagnosis of asthma. Instead we should make a close study of each patient, making a vigorous effort to locate the reflex, which directly or indirectly

has considerable bearing on the development of the disease. The eyes, nose and throat, stomach and intestines, genito-urinary system, and nervous system in general, should be carefully investigated, and the treatment directed accordingly. Six cases, illustrating a variety of causes and treatment, are reported. The pathology is summed up as follows: (1) A vulnerable mucous membrane; (2) abnormally sensitive nerve centers; (3) an external irritant or exciting cause; (4) the presence in the body of known and unknown substances which are toxic to patients susceptible to asthma.

Rest in Pulmonary Tuberculosis.

T. B. Hilleary (*Journal of the American Medical Association,* Jan. 30, 1906) pleads for the routine employment of rest in the open air in the treatment of all active or partially arrested cases of pulmonary tuberculosis. Rest, he says, favors the production in the system of agglutinins, bacteriolytic and antitoxic substances, and this accounts for the lowering of temperature and the lessened activity of the bacilli at the site of the local lesion. In his opinion exercise has no place in the treatment of the disease, and is responsible for the failure to cure nine times out of ten in otherwise curable cases. The effect of exercise, according to Bernheim, is an active congestion in the neighborhood of the tuberculous focus, and often of new tiers of adhesions, mobilization of the bacteria, thoracic pain, and sometimes hemorrhage or pneumothorax. It is the great bar to successful treatment in the working classes, and should be permitted only under strict necessity. Details of the method followed by the author in the open-air rest treatment are given; it does not, of course, preclude the use of other agencies, such as food, general hygiene, and hydrotherapy, in the conduct of the case.

Stomach Findings in Anemia.

F. Rollin (*Berliner klin. Wochenschrift,* No. 6) gives the results of the analysis of the stomach contents in a number of cases of anemia, and finds that in these patients there is always a deficiency or total absence of the gastric juice. The hemoglobin was above normal in cases with hyperacidity, and in cases of nervous dyspepsia it was normal. In cases of subacid gastritis and gastric achylia anemia was constantly present. In his experiments on the dog he found that by the administration of gastric juice the anemia disappeared.

THERAPEUTICS.

Chloride of Calcium as a Hemostatic.

The hemostatic action of chloride of calcium is capable of being turned to good use in general surgery. M. Toubert at a recent meeting of the Paris Surgical Society (*Lancet,* Feb. 10, 1906) gave sundry examples of this from his personal experience. He is in the habit of giving to his hospital patients a draught containing three grammes of calcium chloride to be taken in two or three doses, the last dose to be given an hour or two before the operation. He has used this plan in circumcision, radical cure of hernia, hydrocele or varicocele, removal of the appendix a froid, suture of bones, tenotomies, removal of adenoids, and other operations. In all these the hemorrhage either stopped almost at once or within a little time. As a hemostatic, Toubert considers chloride of calcium preferable to all drugs which are used by being applied to the wound or administered by injection or by the mouth, because of its quick action, its non-poisonous nature, and the ease with which it is employed.

Roentgen Rays in External Treatment.

M. B. Hutchins (*American Medicine,* Feb. 3, 1906) discusses the mode of action of the rays and the various diseases in which patients have been reported cured or benefited. He especially emphasizes that mild prolonged or short strong exposures of the skin or incomplete action of rays may produce epithelioma, and that imperfect and unskilful Roentgen-ray exposures can so complicate a case as to render the use of any treatment, or hope of cure, quite vain.

Treatment of Cerebrospinal Meningitis with Iodine.

G. Edelfsen (*Berliner klin. Wochenschrift,* No. 4) urges the employment of iodic acid and sodium iodate in the treatment of cerebrospinal meningitis in preference to the haloid salts of iodine. In his practice it has prevented serious sequelæ. In addition to the administration of these drugs he applies ice to the head and the back of the neck, and gives large doses of potassium bromide to relieve cramps and vomiting.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Septic Erythema and Urethritis.

D. F. Saraceni (*Clin. Dermosif,* No. 2, 1905; *British Journal of Dermatology,* March, 1906) reports the following case: Three years before the appearance of the present affection the patient was in hospital with a pruriginous eruption, and at intervals since then he had had other, but less marked, eruptions on the eyebrows, trunk, and limbs. At the present time the skin was red, presented small papules, and tended to desquamate. In certain regions circumscribed areas were covered with crusts and pustules; these were most marked on the genitals, forehead, thorax, and abdomen. On the forearms, especially the flexor aspect, the skin was pityriasic and somewhat red. Burning and itching were felt in the affected areas. Though the skin on the eyebrows was affected, the hairs of the eyebrows were normal. On the upper lip there were crusts, through some of which hairs passed. The glans and prepuce were slightly swollen and tender. On the prepuce were adherent scales; on raising these superficial erosions were left. There was a slight purulent discharge from the urethra; threads occurred in the first portion of urine passed. The glands in the groins, axillæ, and neck were enlarged.

The following treatment was adopted: The hair was cut, fresh linen supplied, and sublimate baths given. The pustules were opened and iodoform ointment applied. Endourethral injections of nitrate of silver and sulphate of zinc were used. The patient was discharged in eight days.

Cultures of staphylococci pyogenes aureus and albus were obtained from the scales, pustules, and urethral discharge.

Observations on the Use of the X-ray in the Treatment of Certain Diseases of the Skin.

Fred Wise (*Medical Record,* Jan. 20, 1906) summarizes as follows the conclusions reached in regard to the use of the *x*-ray in treating various disorders at the New York Skin and Cancer Hospital: (1) The *x*-ray will cure ringworm and favus of the hairy skin more rapidly and reliably than any other method of treatment; the advantages of the method are that it is painless,

harmless when properly used, and thorough, and that it cuts down the expense incurred by the city in tl treatment and care of these patients to a very considerable extent. (2) Hypertrichosis should be treated with electrolysis, not with the *x*-ray. (3) The *x*-ray gives very satisfactory results in the various forms of cutaneous tuberculosis, in keloid, in keratoses, in infiltrated patches of chronic eczema, lichen planus, pityriasis rubra, in the tubercles, ulcers, and tumor masses of mycosis fungoides, psorospermosis, and sarcoma. (4) *X*-radiation relieves pruritus, burning, tingling, and pain; it decreases the discharge and foul odors of various dermatoses, often causing them to disappear completely. (5) In selected cases, radiotherapy is the ideal agent in the treatment of epithelioma and rodent ulcer.

Researches into the Origin and Structure of Moles.

From his work on this subject, W. S. Fox (*British Journal of Dermatology,* March, 1906) draws the following conclusions: (1) That in those moles which show the typical columns of nevus cells the cells are epidermal in origin. (2) That there is a rarer variety of soft moles which show no typical nevus-cell arrangement, and whose origin is uncertain, possibly mesoblastic. (3) That the majority of cases of nevo-melanoma are nevo-carcinoma. (4) That melanomata do arise in the skin entirely apart from moles. (5) That Cohnheim's view of the origin of malignant growths is not borne out by the foregoing observations of the histology of nevo-melanoma. (6) That the pigment appears to be closely connected with the prime cause, by reason of which moles become malignant, whatever that cause may be.

GYNECOLOGY AND OBSTETRICS.

Hematoma of the Ovary.

S. Savage (*British Gynecological Journal,* February, 1906) says that the disease occurs in the first half of menstrual life, in the married and in the single. The disease tends to be bilateral, and appears not to be associated with gonorrhea or tubercle, but may be caused by certain forms of septic infection; but more evidence is needed. The onset may be acute, but the pain becomes chronic and is located in the lower abdomen. Menstruation is not affected, though there may be slight menorrhagia.

Dysmenorrhea may occur. There is marked disorganization of the ovary, converting it into a firm, non-collapsible shell of ovarian tissue of very varying thickness, due mostly to edema and interstitial extravasation of blood. The contents consist of dark chocolate blood, generally of a viscid character. Broad adhesions to surrounding parts are always present, being an indication of inflammation of a more or less severe nature. The adhesions are more marked where the tumor is thinnest. The Fallopian tubes more often than not show no gross changes, although primarily it is possible that they may have been inflamed to some slight degree. The relative freedom of the tube is in marked contrast to what obtains in the ovary.

True and False Perforation of the Uterus with the Curette.

R. Kiriak (*British Gynecological Journal,* February, 1906) discusses this accident with illustrations from his own experience. True perforation depends chiefly on abnormal softness of the myometrium, and is favored by displacement of the uterus, especially so by extreme anteflexion. Experience shows that perforations of the anterior wall are not generally followed by serious results, for as a rule the peritoneum is not perforated; those of the posterior wall generally do pass through the serosa and may cause serious symptoms. False or apparent perforation may depend on one of the following causes: The introduction of the instrument into the dilated ostium of one of the Fallopian tubes, or into sarcomatous, carcinomatous, or, when the accident occurs after abortion or labor, into placental tissue, or from the instrument passing into an extremely large uterine cavity in cases of passive hypertrophy of the organ. False perforation is rare, but it is of practical importance to know that it may occur.

Case of Stovaine Poisoning.

Trantenroth (*Deutsche med. Wochenschrift,* No. 7, 1906) reports a case of stovaine intoxication following a lumbar injection of 0.06 gramme, preceded by a 1:1000 solution of adrenalin. The case was one of forceps delivery. Ten minutes after the injection the patient complained of suffocation, the pulse became slow and small, and the respiration slow and shallow. She became unconscious, but revived after injection of 2 grammes of a 20-

per-cent solution of camphor. The muscles were relaxed and both legs paralyzed. Three days later severe headache developed, with pains in the limbs, which lasted four days, to be followed by a sensation of an electric current passing through the body. Fourteen days after the injection a local spinal meningitis and neuritis developed, and the woman was unable to leave her bed for five weeks.

Artificially Induced Menopause.

E. Pollk (*Monatsschrift für Geb. u. Gynäkologie*) ascribes the morbid conditions seen after a prematurely induced menopause to the imperfect oxidation of fat. This is due to a lack of the internal secretion of the ovary. The accumulated fat embarrasses the heart's action and that of the other large parenchymatous organs. It accumulates in the muscles of the body, including those of the heart, and interferes with their physiologic function. These opinions are the result of the author's experimental and clinical observations.

NEUROLOGY.

Unrecognized Epilepsy.

Spratling (*Journal of the American Medical Asociation*, March 10, 1906) makes a plea for the more accurate observation and earlier recognition of epilepsy. Too often is the disease thought of as always manifesting tonic and clonic convulsions, whereas a recognition that its manifestations may occur *with or without convulsions* would lead to its earlier and more frequent detection. Attacks of petit mal are often neglected entirely.

"Weaknesses," "faints," "worm fits," "teething fits," "stomach fits," "lapses," etc., are terms used to cover careless and inaccurate observation, and to designate manifestations the early appreciation of the gravity of which would be greatly to the patient's interest. If these were early recognized and long treated, many an epilepsy, into which these so easily pass, might be prevented, for, as with tuberculosis, so here, freedom of the disease in a patient with tendencies to much disturbance of nervous equilibrium is many times simply a matter of *right living*.

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ORIGINAL CONTRIBUTIONS.

INGUINAL HERNIA IN A FEMALE—AMPUTATION FOR POPLITEAL ANEURISM.[1]

BY HORACE GRANT, A.M., M.D.

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Gentlemen: This girl is twenty years of age, and has suffered ever since her third year with an inguinal hernia. Inguinal herniæ, as you know, are far less frequently seen, comparatively, in the female than in the male, but the impression that it does not occur, or is very rare, in the female is a mistaken one. The fact that femoral hernia is much more common in women than in men, and that the inguinal form is much more common in men than in women, has given rise to the impression that women rarely have inguinal herniæ. The absence of the spermatic cord in the inguinal canal of the female renders the occurrence of hernia in that situation much less frequent. The round ligament, however, occupies the same position in the female that the cord occupies in the male, but the round ligament is so much smaller than the cord that there is less to occupy the canal in the female, consequently inguinal hernia is far less frequent. Still three or four such cases have been operated upon in this clinic during the present session.

The operation which we do in these cases is practically the same as done in the male, except that the round ligament is usually caught up and lifted out of the way, and we do not have to observe the same precautions in suturing the conjoined tendon or Poupart's ligament underneath the cord as in the case of the male. The round ligament can be either drawn up into the

[1]Clinical lecture delivered at the Gray Street Infirmary before the class of the Hospital College of Medicine.

wound and fixed there by a suture, or it may be pushed to one side, and will take care of itself without any suture being introduced.

This hernia is upon the right side. I have never examined the patient before, but the history is that the hernia has occasioned quite severe pain which has prevented her from working, or keeping on her feet for any great length of time. She has for the past two or three years acted as chambermaid in a hotel, and has been unable recently to keep up her work longer than a week or ten days at a time, because of the pain produced by the protrusion. A tumor presents, according to her indicating, at the external abdominal ring, and although we have not seen any tumor, the site must be above Poupart's ligament, consequently it can only be looked upon as an inguinal hernia. If it were femoral it would be below Poupart's ligament, and there would be no chance of confusing it with an inguinal hernia. Femoral hernia, and especially where it is strangulated, occasionally turns up over Poupart's ligament in such way as to make diagnosis to some extent difficult; the tumor rolls up when it is marked over Poupart's ligament, resembling an inguinal hernia which is tightly pushed down through the external abdominal ring. A little care, however, in making an examination will enable one to determine whether the hernia is femoral or inguinal. Where the hernia is readily reduced, as in this case, there is no difficulty in determining the point of exit.

The first step in this operation will be exposure of the external abdominal ring, then a search will be made for the hernial sac; a guide to this will be the pillars of the ring. There is no tumor present, and none of us have observed the hernia. This woman came into the infirmary without an examination, and I am obliged to relate the history that she and the family physician have given me, that the hernia presents at the external abdominal ring on the right side. I can readily feel that the ring is considerably enlarged.

I now expose the external abdominal ring, and we see what is apparently the sac below. The ring is opened sufficiently to well expose the hernial sac, and the latter is then drawn up into the wound. Those of you who are nearest can distinctly see into the sac as I open it. A free opening has been made in the sac; it has been separated from its attachments, and is drawn well out, and we will tie it off with catgut. There is no intestine in the sac, this hernia, as I told you, being easily reduced. You see the

smooth outline of the sac which I have freed up to the internal abdominal ring. For the sake of safety from hemorrhage, transfix the sac and carefully tie it off with catgut, and the stump will be allowed to drop back into the abdominal cavity.

There is little risk of hemorrhage in these cases, but I always feel safer if the ligature has been carefully placed. As soon as we loose hold on the stump you see it goes directly out of sight in the abdominal cavity. You can distinctly see where I have drawn up Poupart's ligament on this side, with the round ligament lying across the wound. On the opposite side you can see the shelving of the conjoined tendon. These structures are picked up with forceps for the sake of illustration. You see the round ligament going out between these two portions of fascia that are held apart. We will pay no attention to the round ligament further than to push it aside.

I will now close the wound after the method I have shown you on several previous occasions, by the use of longitudinal silkworm-gut sutures, buried somewhat after the suggestion made by Davidson, of Chicago. I have never used this method in herniotomy, although you have seen me use it in other wounds, but Davidson reports very successful results. The sutures in the fascia are left in place for three weeks, and are applied according to what is called the herring-bone method. I first close the peritoneum by this method, next carry a suture through to the lower border of the wound and make it pass across to include the conjoined tendon on the opposite side. You see Poupart's ligament as I lift it up, which makes the suturing perfectly simple, and I think we can complete the operation much more rapidly than by the buried suture of catgut. I have more or less lost my confidence in the absolute integrity of the asepsis of catgut, and am satisfied that in a number of instances infection occurs as late as the tenth to fourteenth day after the use of buried sutures of catgut, where there is perhaps traumatism of rather unusual degree inflicted, and the result is after doing an apparently aseptic operation in every particular, using catgut as the suture material, owing to the conditions stated, germs which are latent in the catgut develop colonies, producing a moderate amount of infection. I have never seen infection following an operation of this kind which gave any serious trouble, or occasioning any failure in repair, but enough to make it necessary to repeat the dressings a number of times, and cause delay in healing.

We have closed the fascia and muscles with a continuous

herring-bone suture; we can simply see the line of suture, and closure is absolutely perfect. We will tie this suture and put a strand of silk through it, so as to be able to recognize it as the suture which is to remain in for three weeks. The most difficult part of this operation is sometimes to get the suture tied with proper tension, and it requires no little skill to tie the knots properly. I have drawn this suture fairly tight so as to force the tissues together, shirring them up so as to make something of a purse-string suture of it. I will now close the fascia of the external oblique muscle and proceed to complete the operation.

We find a small vessel in the external structures which we shall have to ligate with small catgut. The suture with which we will close the fascia of the external oblique will not be allowed to remain in so long, and it will not make any difference about its being identified; it being in the fascia we can take it out after the expiration of a week, and at the same time we remove the sutures which will be placed in the skin. You see I also draw this suture tightly, shirring it up, and then tie the knot. My impression is that we will have less irritation here than if we had a buried suture.

The skin suture will be subcuticular, also of silkworm-gut, which is very pliable, and we will have no trouble in making the short stitch necessary in closing the skin subcutaneously. It appears, too, that by this method we will get constant capillary drainage from the deeper structures along the line of suture better than where we use the through-and-through method, or bury the sutures. With buried sutures we do not get any capillary drainage, but by this method we get an oozing for the first twenty-four hours of serum that is in excess, and of course a less favorable field is presented for the colonization of any accidental germs. Everything used in this wound, with the exception of the ligature employed for closing the sac, is absolutely sterile, because it has been boiled.

Davidson claims that by using a form of purse-string suture of silkworm-gut in the sac, the suture can be removed after two or three weeks in the same way as the suture is taken out of the skin and fascia; in fact, he says it is perfectly safe to remove the suture at the end of a week. I have hesitated to employ that method because it is impossible to obtain absolute hemostasis in the sac, and if a ligature is placed around the sac and it is dropped back into the cavity, trauma having been slight, there is little or no risk of infection from it, and there is much less danger of

hemorrhage. In the next place, I believe the removal of this suture would be very painful. These sutures which have been placed in the fascia give little pain in their removal, and up to the present time I have had no suppuration follow any of the operations I have done. This I look upon as the best test, because the operation is distinctly one in which considerable traumatism is necessary, and suppuration following it is not infrequent.

You will notice this wound has been closed with absolutely no puncture of the skin, and it is in a very favorable condition for perfect repair. In the operation for appendicitis which I did before you a week ago, when the wound was closed with this form of suture, there has been absolutely satisfactory repair.

In doing this operation Dr. Davidson uses sutures of different colors—he colors the silkworm-gut with some non-irritating foreign matter—one suture being red, another blue, and the other is of the natural appearance as we have here, so that he is enabled without any trouble to identify the different layers of suture. This can only be a matter of importance when it is desirable to remove one layer of sutures at one time, and another at another. As we have not sutures of different colors we identify them by slipping a piece of silk through the loop of the one which is to remain in the longest.

The second patient, a man aged thirty-four years, you will remember we operated upon four days ago, performing an amputation of the leg for a large aneurism in the popliteal space. When we cut down upon the aneurism all the structures surrounding it were in a softened condition; the walls of the aneurism itself were so softened as to be almost in a gangrenous condition. The clots were all apparently included within the aneurismal sac, some were partially hardened in different points, others were soft and apparently fresh.

The history of the case was that the tumor had been enlarging rapidly for several weeks; the man was suffering a great deal of pain; his pulse was rapid; he was unable to sleep without the administration of morphine. After cleansing out the clot we drained the cavity in two directions so as to give no possible chance for the accumulation of septic products from the damaged sac. It appeared, however, at the third dressing we gave this man, about the fifth day, that the knee-joint was involved, sloughing of the tissues which lay directly over the joint had occurred, probably from long-continued pressure of the tumor. At any rate diseased bone could be distinctly felt, and upon exploration

it was found that the knee-joint contained an abscess. Free incisions were made, but a general septic condition was found present in the patient, and after eight or ten days this septic condition was seen to be progressing, the man became more and more feeble in spite of what appeared to be thorough drainage, and four days ago we decided it was advisable to remove his leg above the knee. The ligature that we had placed around the vessel at the point of election, below Poupart's ligament, had held perfectly, there was no evidence of any irritation at this point, circulation was apparently established in the foot, except at one or two points from long-continued pressure there was evidence of beginning bed-sores. No gangrene, however, had occurred. The leg was amputated just above the knee. Collateral circulation had apparently been perfectly established, the femoral artery pulsated distinctly after the ligature was applied, and all the smaller vessels in the muscular tissue and in the fascia bled freely, showing that in nature's effort to establish collateral circulation all these vessels were dilated. We experienced some trouble in controlling the oozing from these vessels, and were obliged to pack the wound in order to make it perfectly safe, the man being feeble, and it being risky for him to lose any more blood. Saline solution was injected, some directly into a vein, and some subcutaneously. He reacted well from the operation, and as you see is in first-rate condition to-day.

This man presented, you will remember, at the time of the operation, a small point of necrotic tissue where the muscles were divided. In order to have avoided this necrosis we would have been obliged to amputate several inches higher up in the thigh, and I preferred to curette this tissue out and thoroughly cauterize it with carbolic acid neutralized in a moment or so with alcohol, and allow the wound to remain open at that point for drainage.

As you observe there is absolutely no redness about the wound, it is apparently in a healthy condition, and there is but little drainage from it; the man is suffering almost no pain. Union is apparently taking place normally, and there is no evidence of inflammation or swelling. I have never seen a more satisfactory-looking stump, as far as the processes of repair are concerned, than this man has at the end of the fourth day.

The interesting feature in this case was the existence of a large aneurism which had filled up with a clot, and pulsation had completely ceased in it. Whether or not this aneurism had ruptured was not actually determined at the time of the operation.

It appeared that the clot had perhaps formed within the sac, and an attempt had been made by nature to completely cure the condition. Pressure, however, had been so great and had continued for such a length of time that infection had taken place in the clot, necrosis had already occurred in the structures immediately covering the joint on the inner surface, and necrosis of bone was beginning. You will remember after the amputation was done I showed you four points of necrosis upon the condyle of the femur. It would have been hopeless to have undertaken to save this man's leg in the condition of feebleness and sepsis that he presented.

Since the operation his general condition has greatly improved, his appetite is much better, he suffers no pain, and he feels in every respect greatly relieved since the limb was removed. His temperature is 99.2° F. this morning, and during the day yesterday at its highest it was only 100.6° F. Before the amputation his temperature had been ranging from 103° to 104° F., showing that the septic condition was rapidly sapping his strength, and in a short time he would undoubtedly have perished unless relieved. Nothing more conservative in the way of surgery was to be thought of under the circumstances.

I think in the course of a few weeks he will have entirely recuperated; at any rate he has now every promise of a complete recovery.

A REVIEW OF THE LITERATURE OF PRECOCIOUS MENSTRUATION AND PRECOCIOUS PREGNANCY.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Contrary to the hitherto almost universally accepted teaching, it has been shown by investigation that neither racial characteristics nor climatic influences are entitled to serious consideration as determining factors in the production of feminine *vita sexualis*.

In the United States the age at which first menstruation ordinarily occurs is stated as fourteen years, and in the temperate zone of Europe (England, Germany, Ireland, etc.) fifteen and a half years, showing that American girls are slightly more precocious than those of other countries in the same zone. The Canadian-French girl born in this country is said to menstruate at thirteen, whereas in her native country the average age at which the catamenia becomes established is fourteen to fifteen years.

The statement is familiar that in hot climates menstruation almost invariably becomes established at the age of ten to eleven years, that the Esquimau women do not menstruate until they are twenty-two or even older, and in the latter that the flow occurs only during the summer months, all of which is distinctly at variance with all recognized physiological dicta and not borne out by clinical facts, as can be easily demonstrated by investigation and inquiry.

Englemann tritely remarks "mentality, surroundings, education, and nerve stimulation stand out prominently, in this country, as the factors which determine precocity."

Menstruation has occurred at practically every period in the life history of the female human being, literally from the cradle to the grave,[1] and the same statement is in slightly less degree applicable to pregnancy. According to most authorities, however, the age limit between which pregnancy is possible is determined by normal establishment and cessation of the catamenia—*i.e.*, ordinarily in this country the fourteenth and forty-fifth year; but apparently based upon the hypothesis that ovulation is necessarily coincident with and dependent upon the process of menstruation, there usually accompanies this declaration the proviso that exceptionally the menses may appear as early as the tenth and may not finally terminate until the fiftieth year or even later. Such an assertion is far from the truth, since pregnancy in many instances has occurred before appearance of the menstrual flow, and is not unknown years after the menopause.

Joubert insists (with Playfair) that the influence of climate on the catamenia has been unduly exaggerated, as in over three thousand cases observed in Calcutta during four years, including European and native women (rich and poor, in private and hospital practice), he found little difference in the percentage for various ages between Europeans who had passed their youth in Europe and the women of pure blood born in India, viz., 23.4 per cent of the former and 25.8 per cent of the latter began to menstruate when thirteen years old. He also claims that early

[1]It is claimed that the phenomena of early menstruation are due to precocious maturation of Graafian follicles, the investigations of Corte, Pouchet, Raciborski, Longet, Sappez, and others having shown that even in fetal life the ovaries contain numerous follicles which only await favorable occasion for development, and that autopsies have revealed visible follicles before the end of the first year. These claims appear only partially true, since it has been proven by other observers that menstruation bears no distinct relationship to the process of ovulation.—Q. W. H.

menstruation is determined by precocious knowledge and too early exposure to sexual excitement.

Menstruation (and likewise pregnancy) may be regarded as precocious when it takes place prior to the period when *vita sexualis* should normally be expected. Many ingenious and fanciful theories have been suggested to explain such phenomena when they occur, but theoretical propositions utterly fail in elucidation of the observed clinical facts. There are on record hundreds of authentic cases of infantile menstruation and impregnation, the majority of them being associated with precocious or abnormal development in other directions.

Cases of menstruation commencing within a few days after birth and exhibiting periodical recurrence are spoken of by Penada, *Neues Hannoverisches Magazin,* Drummond, Buxtorf, Arnold, and a host of other observers.

Cecil relates an instance in which an infant menstruated on the sixth day after birth, continuing five days, six or eight drachms of blood being lost; and Peeples cites a similar case (in Texas) in an infant at the age of five days, which was associated with a remarkable development of the genital organs and breasts.

Van Swieten offers an example at the first month, the *British Medical Journal* at the second month, Conarmond at the third month. A slave girl (in Havana) began to menstruate soon after birth, and when a year old the function was regular. Her mammæ at birth were well developed, and the axillæ slightly covered with hair. At the age of thirty-two months her genitals and breasts resembled those of a girl of thirteen.

Deever records an instance in which a child two years and seven months old had (with the exception of three months) menstruated regularly since the fourth month; and Harle speaks of a child who had a bloody discharge at five months which lasted three days and recurred every twenty-eight days until she was weaned at the age of ten months. Menstruation returned the eleventh month and continued periodically until death (occasioned by diarrhea) at fourteen months of age. Necropsy showed a uterus one and five-eighths inches in length, the lips of which were congested, and the left ovary was twice the size of the right, but displayed nothing strikingly abnormal.

Baillot and the *British Medical Journal* cite instances of menstruation at the fourth month, and another case is referred to in which an infant menstruated at the age of six months, and whose

menses returned on exactly the twenty-eighth day. Clark, Wall, and the *Lancet* describe cases at the ninth month, Nagle has seen a case at the eighteenth month, and Schmidt and Colley in the second year. Another case is that of a child nineteen months old whose breasts and external genitals were fully developed. She was symmetrically formed and of pleasant appearance.

Warner speaks of a Jewish child in Cincinnati whose menses began at the twenty-third month and continued regularly. At the age of three and a half years she was thirty-eight inches tall, weighed thirty-eight pounds, her girth at the hip was thirty-three and a half inches, the pelvis was broad and well shaped and measured ten and a half inches from the anterior surface of the spinous process of one ilium to that of the other, the mammæ and labia had all the appearances of established puberty, and the mons veneris and axillæ were covered with hair. A case somewhat similar (though the patient had the appearance of a little old woman) was a child of three years whose breasts were as well developed as in a girl of twenty, and whose sexual organs resembled those of a girl at puberty. She had menstruated regularly since the age of two years.

Woodruff describes a child who began to menstruate at two years of age and continued to do so regularly thereafter. At six years she exhibited signs of puberty. The breasts were well developed and hair was present on the mons veneris.

Van der Veer cites the case of an infant who began menstruating at the age of four months and continued regularly for over two years. She had the features and development of a girl ten or twelve years old. The external labia were well formed, and the mons veneris was covered with a full growth of hair.

Sir Astley Cooper, Mandelshof, the Ephemerides, Rause, Geoffroy Saint-Hilaire, and many others report instances of menstruation occurring at three years of age. Le Beau describes an infant prodigy who was born with mammæ well formed, and as much hair on the mons veneris as a girl of thirteen or fourteen. She menstruated at three and continued to do so regularly. The flow was copious and lasted four days. At four years and five months she was forty-two and a half inches tall, her mammæ the size of a large orange, and the indications were that she would be able to bear children at the age of eight.

Prideaux cites a case at five, and Casals saw a girl of six years who periodically suffered abdominal colic, hemorrhage from the nose, migraine and neuralgia, which with the association of

pruritus of the genitals and engorged mammæ led him to suspect amenorrhea. He ordered baths, and shortly menstruation appeared and became regular thereafter. Brierre de Boismont records cases of catamenia at five, seven, and eight years, and Skene mentions a girl who menstruated at ten years and five months.

Tidy mentions the case of a girl who menstruated when four years old, and became pregnant at eight years. Irion records an instance in which a child menstruated from birth, the flow returning with perfect regularity. In one instance in which the period was missed the child suffered apparently in the same way as would an adult female under similar circumstances. The breasts and mons veneris were considerably developed, and during the menstrual flow the breasts enlarged and became sensitive to the touch. The mother of this child menstruated at the age of thirteen years.

Howie cites the case of a girl who commenced to menstruate when three years old. During menstruation she complained of pain in the back and was languid. The pubic hair was quite well grown, the vulva well formed and large, and the breasts prominent.

Morse reports a case of precocious maturity in a girl infant, menstruation beginning at the age of nine months, and claims that precocious maturity is a physiologic congenital anomaly of development; that menstruation is never the first symptom but is always preceded and accompanied by others; that the catamenia most often appears in the first two years, and is accompanied by ovulation; that the attributes of maturity are not all acquired before the age of seven or eight years; that sexual desire is soon developed; that pregnancy may occur early; and that menstruation may continue as long as when it begins at the normal time.

Grover speaks of a female child having unusually developed mammæ (especially the nipples) which secreted milk so abundantly that the mother had to "pump the milk" from both glands once daily, and that the child was fretful until this was accomplished. The amount obtained each time was about two fluidrachms, and the secretion had the identical appearance of mother's milk. The author states that the secretion of milk began when the child was one week old.

Price records the case of a girl who menstruated at four years of age, and in whom hair was noted on the pubes and

axillæ at the age of eighteen months. Her body was shapely, hips broad, and breasts well developed. The sexual organs were normal in conformation with the exception of a slightly hypertrophied clitoris. Waldmiroff refers to a case of precocious adolescence in a rachitic girl of six and a half years.

Lopez mentions a child five years of age who had menstruated since she was eighteen months old, the flux being abundant in quantity and persisting three to five days. Two days before each period she complained of pain in the pelvis and general malaise, such as characterizes the same physiological operation in the adult female. The mons veneris and external organs of generation were abundantly developed. The age of the mother was twenty years, and she was married at fourteen.

Rein exhibited before the Kieff Obstetrical and Gynecological Society a girl aged six years who commenced to menstruate regularly about a year previously. The catamenia recurred every three or four weeks, and on each occasion lasted from four to ten days. The breasts, external genitals, and pubic hair growth resembled those of a girl at thirteen or fourteen years.

Seuvre mentions a case of menstruation in a girl aged four years and nine months. The labia were well developed and covered with hair, as was also the mons veneris, and her breasts were as large as those of a girl at sixteen years. The mammæ contained milk a few days after birth. The thighs were strong and muscular, and the pelvis large.

Raciborski cites cases of menstruation in children three and two years of age respectively, and Descuret also reports a case at two years.

Howard records a case of precocious development in a girl aged eleven years. There was marked enlargement of the mammæ, and vicarious menstruation took place from the rectum accompanied by violent attacks simulating hysteroepilepsy, which persisted thirty-six hours or more and recurred with considerable regularity.

Townsend refers to a case of precocious maturity in a female child one year old. The breasts were enlarged, the nipples undeveloped, pubic hair thick and about half an inch in length. The breasts began to enlarge at the age of three months, and at six months menstruation began and recurred regularly thereafter.

Mores observed a case in which an infant began to menstruate at nine months, and when examined at one year and three months old the catamenia was quite regular. The mammæ were well

developed, the nipples large, with dark-pink areolæ, and the cervix and uterus could be plainly detected on digital examination.

Allan reports the case of a girl seven years old who had menstruated for some time, and Lusk mentions a child under the age of six years which menstruated regularly.

Cecil reported before the Louisville Medico-Chirurgical Society the case of an infant a few days old in whom there was observed the discharge of dark, venous (evidently menstrual) blood from the vagina which continued several days, and stated that close inspection failed to disclose source of the hemorrhage, and no cause except precocious menstruation could be assigned. There was no abrasion of the vaginal mucous membrane, and the discharge had every appearance of menstrual blood. There was no abnormality of overgrowth of the mammæ or external genitals.[1] Bullock and several others at the same meeting stated that they had observed similar instances.

De Vlaccos gives details of a distinct instance of precocious puberty. When six years of age the child had all the appearances of a girl of ten, excepting the genital organs and mammæ were more fully developed. When six months old there was a bloody discharge from the vagina, which returned in six weeks. The interval steadily became shorter until the catamenia appeared monthly, lasting four days, the child becoming depressed in spirits at each period. The mammæ resembled those of a girl of seventeen, and not only had hair grown on the pudenda, but much subcutaneous fat had developed about the thighs and nates, as normally occurs at puberty.

Perrier mentions a child who began to menstruate regularly at the age of nine months. When seen three months after menstruation commenced the breasts were well formed, the nipples protruding, the pubes covered with hair, the labia majora and minora well developed.

Strecker refers to a child between three and four years old in whom shortly after birth there was noted a bloody discharge from the vagina which continued for a few days and gradually disappeared. Eighteen months later hemorrhage returned and lasted two days. The onset was preceded and accompanied by severe abdominal pains. Two months later it again appeared, ushered in by similar symptoms. The following month the same

[1]This may or may not be a duplicate of the case previously referred to.—Q. W. H.

condition prevailed, and also two months later. There was then a lapse of five months, when the flow again made its appearance, and has done so regularly every twenty-eight days since. The onset was always preceded by pain and discomfort. The face and development of the child were typical of sexual precocity, her bones were large, the muscles well developed, the mammary glands large and prominent, and at the menstrual periods she complained of pains shooting through them. The mons veneris was covered by a growth of hair.

Klein saw a case of precocious sexual maturity at two and a half years. At the age of ten months the mother noted unnatural bodily development, well formed breasts, large, hairy genitals, and from the latter a flow of blood recurred at regular menstrual intervals. Examination showed the genital system perfectly matured, mammæ the size of large lemons, the nipples erect and surrounded by dark, pigmented areolæ. The size of the vulva resembled that of a fourteen-year-old virgin. The labia majora, moderately supplied with fat, were in contact and covered with a growth of hair. The labia minora were small, developed only in their upper third, the clitoris long and thick.

Frew mentions a child who menstruated on the third day after birth, the flow lasting three days. She was otherwise normal and apparently healthy. Bates also describes the case of a child who began menstruating when three days old. The flow persisted seven days, numerous clots being passed the first three days.

Labean records the case of a four-year-old child whose mammæ and labia were well developed and the mons veneris covered with hair. Menstruation began at the age of three years and was regular thereafter. Jardine refers to two cases in which infants menstruated when six days old, the breasts being markedly engorged and tender to the touch; and similar cases are mentioned by the *Maryland Medical Journal* and the *American Medical Compend.*

Menstruation occurring in girls between the ages of eight and twelve years is so frequently encountered that such cases are not included in this review, the intention being to present only those instances which may be regarded unusual and unique.

Sir Astley Cooper remarked that on one occasion he saw a girl seven years old whose pelvis was so fully developed that he was sure she could easily give birth to a child, and Warner's case of the Jewish girl three and a half years old with a pelvis

of normal width more than substantiates this supposition. Similar examples of precocious pelvic and sexual development are on record in abundance.

The earliest case of impregnation that can be found in the literature is one spoken of by von Mandelslo, at the age of six years, but Gould and Pyle state that careful search in the British Museum failed to confirm his statement.

Molitor cites an instance of precocious pregnancy in a child aged eight years. It was probably the same case reported by Lefebvre to the Belgium Academy, viz., a girl well developed sexually, having hair on the pubes at birth, who menstruated at four, and at the age of eight was impregnated by a cousin of thirty-seven. The pregnancy terminated by the expulsion of a mole containing a well characterized human embryo.

Schmidt describes a child who had menstruated at two, and bore a dead fetus when she was eight years and ten months old. She had all the appearances and development of a girl seventeen or eighteen years old.

Kussmaul gives an example of conception at eight, and Dodd speaks of a child who commenced to menstruate early and continued up to the time of impregnation. Her labor pains continued but six hours; the fetus at birth weighed seven pounds, and afterward died in convulsions. The mother at the time of delivery was nine years and eight months old, consequently must have been impregnated before the age of nine.

Meyer gives an astonishing instance of birth in a Swiss girl at nine, and Carn describes the case of a child who menstruated at two and became pregnant at eight.

Ruttel reports conception in a girl of nine, and as far north as St. Petersburg a girl has become a mother before nine years. Another case is recorded of a boy, who survived, being born to a mother of nine years, and Beck reports an instance of delivery in a girl ten years of age. There are also cases of fecundity at nine years recorded by the Ephemerides, Wolffius, Savonarola, and many others.

Gleaves gives the history of what he terms the youngest mother in Virginia, a girl aged ten years and two months, who was delivered of a well formed child weighing five pounds. The girl had none of the development of a woman, although she had menstruated regularly since five years of age. The labor was short and uneventful; two hours afterward the child-mother wanted to get up and dress, and would have done so had she been

permitted. There was no mammary development nor secretion of milk, and the baby (which only lived a week) was nourished by its grandmother, who then had a child but a few months old. At the time the report was made Gleaves said the child-mother was well, playing about with other children as if nothing unusual had happened.

Harris refers to a Kentucky woman a mother at ten years, one in Massachusetts a mother at ten years, eight months, and seventeen days, and one in Philadelphia at eleven years and three months. The first case was one of infantile precocity; the others belonged to a much later period, the menstrual function having been established but a few months prior to conception. All these girls had well developed pelves, large mammæ, the general marks of womanhood, and bore living children.

It has been remarked of three markedly precocious cases of pregnancy that one was the daughter of very humble parents, one born in an almshouse, and the other raised by her mother in a house of prostitution. Perhaps the only significance of this statement is the greater amount of vice and opportunity for precocious sexual intercourse to which they were exposed.

Haller observed a case of impregnation in a girl of nine, who had menstruated for several years, and others who had become pregnant at nine, ten, and twelve years respectively. Rowlett saw a child who had menstruated the first year and regularly thereafter, and gave birth to a child weighing seven and three-quarters pounds when she was ten years and thirteen days old.

Curtis relates the history of a child who became pregnant before she was ten, and was delivered of a full-grown living male child weighing eight pounds. She had menstruated once or twice before conception, was fairly healthy during gestation, and had a rather lingering but natural labor. One of the faculty of Montpellier reported an instance (at New Orleans) of a young girl of eleven who became impregnated, and Maygrier said he knew of a girl of twelve who was confined.

Harris gives the particulars of the case of a white girl who began to menstruate at eleven years and four months, and who gave birth to an oversized male child when she was twelve years and nine months old. She had an abundance of milk and nursed the child. He also speaks of a mulatto girl who began to menstruate at eleven years and nine months, and gave birth to a female child before she had reached thirteen, and bore a second child when fourteen years and seven months old.

Statistics from India, where child marriage is extremely common, show one pregnancy at ten, six at eleven, two at eighteen, and one at nineteen years.[1] Chevers mentions a mother at ten, others at eleven and twelve years, and Green performed craniotomy upon the fetus of a girl of twelve. Wilson gives an account of a girl of thirteen who gave birth to a full-grown female child after three hours' labor. King reports a well verified case of confinement in a girl of eleven.

Robertson describes the case of a girl who was a mother at twelve; de La Motte mentions pregnancy before twelve; Kilpatrick in a negress at eleven years and six months; Fox at twelve; Hall at twelve; Kinney at twelve years, ten months, and sixteen days; Herrick at thirteen years and nine months; Murillo at thirteen years; Philippart at fourteen years; Stallcup at eleven years and nine months; Stoakley at thirteen years; Walker at twelve years and eight months, another case at twelve years and six months; and Williams at eleven years.

Records of the Paris Maternité show that girls have been admitted at eleven years and even younger, and that pregnancy is not infrequently seen at thirteen years among certain classes. Numerous instances are recorded in the literature in which women were grandmothers at twenty-one to twenty-nine years, or about the ordinary age of maternity.

A case is mentioned in the *Lancet* in which a girl aged eight years and ten months gave birth to a child which weighed seven pounds. Allen records the case of a colored girl who became impregnated at the age of ten years and eleven months, and gave birth to a fully developed child when eleven years and eight months old. The labor was easy, and both mother and child survived.

A typical case of precocious pregnancy is that of a girl ten years and two months old who gave birth to a child weighing five pounds after an uneventful labor. The mother had men-

[1]In this connection the following paragraph clipped from a secular periodical may be of interest: Sirdar Arjan Singh said in India people married in childhood, sometimes in infancy, and not rarely the promise of marriage was made before birth. If a girl was unmarried at twelve she was regarded as disgraced and her father as a sinner. About 400,000 children in every five years were married when under five years of age. Many girls then married became widows while still babies or small children, and the misery of widowhood in India was inconceivable to the European mind. The writer cannot vouch for these statements; they may or may not be true, and they are simply interpolated as additional items of interest anent child marriage in India.—Q. W. H.

struated regularly since the age of five years, but evinced no other signs of precocious development.[1]

Gossett records the case of a colored girl aged fourteen years who had been in labor a week when seen. It was a transverse presentation of a large fetus, and delivery was accomplished by podalic version. The membranes had ruptured five days previously. Labor was difficult and prolonged, resulting in laceration of perineum and vagina. Final outcome not stated.

Cecil mentions the case of a girl fifteen years old who was instrumentally delivered of a dead hydrocephalic child after an exceedingly tedious and complicated labor. The girl had puerperal convulsions at the time. It was a face presentation; forceps were repeatedly applied with negative results; craniotomy was then practiced. A large hematoma of the vulva was ruptured during the delivery, and complete laceration of the perineum occurred. The girl died a week or two later.

Some one has said that it requires greater tact and judgment to epitomize intelligently than to write originally; and Ruskin at one time remarked that he had always thought more true force of persuasion might be obtained by rightly choosing and arranging what others had said, than by painfully saying it over again in one's own way.

Any one who has ever undertaken to compile statistics based upon abstracting and epitomizing data published in medical literature, ancient or modern, can readily appreciate the difficulties encountered by the writer in preparing the foregoing collection of unusual and unique cases. Many of the data presented are based upon abstracts taken from the admirable work of Gould and Pyle on the Anomalies and Curiosities of Medicine, the balance being excerpted from various medical publications, a partial list of which will be found appended hereto.

It became necessary to examine such a mass of literature, and to abstract such a large number and variety of articles original and otherwise, that the writer regrets his utter inability to give correct dates of the original reports.

As practically all the subject-matter presented has hitherto appeared in medical print, the writer desires to acknowledge his indebtedness to the various publications, and to thank the publishers for the privilege exercised in abstracting the requisite data from their columns.

[1]This is more than likely a duplicate of the case accredited to Gleaves, of Virginia, as all details correspond therewith.—Q. W. H.

A PARTIAL LIST OF THE LITERATURE CONSULTED.

Anomalies and Curiosities of Medicine; *New York Medical Journal; Medical Record; Archives of Pediatrics;* MEDICAL AGE; *American Practitioner and News; Louisville Monthly Journal of Medicine and Surgery; Atlanta Journal-Record of Medicine; Vratch* (MEDICAL AGE); *Medicine; Louisville Medical Monthly; Legal Medicine* (Herold); *Mississippi Medical Record; Medical Council; American Medicine; American Journal of the Medical Sciences; Obstetrics; Carolina Medical Journal; Gaillard's Medical Journal; British Medical Journal; Therapeutic Gazette; Pediatrics; American Journal of Obstetrics; Memphis Lancet; Year-Book of Medicine and Surgery; Annals of Gynecology and Pediatrics;* London *Lancet; L'Union Médicale* (MEDICAL AGE); *Medical Times; American Medical Compend; Maryland Medical Journal; Journal of the American Medical Association; American Medico-Surgical Bulletin; Medical and Surgical Reporter; Philadelphia Medical Journal; North Carolina Medical Journal; Indian Medical Gazette* (Gould and Pyle); *Rev. d. l. Soc. Med. Arg.* (MEDICAL AGE).

ACCORDING to the *Journal des Debats* the Council of the University of Paris has recently decided to comply with the request of foreign doctors of the university that they should be granted a distinctive academic badge which should be worn in public ceremonies in their own countries. Henceforth foreign holders of the degree of Doctor of the University of Paris are authorized to wear on such occasions a hood in the colors of the city of Paris with three rows of ermine. This hood may be worn over the gown of any university. In cases in which the Paris doctor has not the right to array himself in the robes of any other university, he will be entitled to wear the black gown which is the official dress of public teachers in France.

ON the initiative of Dr. Cesar Roux, the sanitary card has been introduced into the municipal schools of Nice. Each pupil is provided with a small book, in which are recorded all particulars as to his age, domicile, place and date of birth, successful vaccination, weight, height, chest girth, and aptitude for sports. The booklet also contains elementary notions of hygiene, advice for the correction of wrong positions in reading and writing and on the dangers of alcohol and tobacco. A card attached to the book is handed to the medical inspector, who is thus enabled to advise the parent of the child as to the care to be exercised in his bringing-up. A special advantage of the sanitary card is that, by means of the observations recorded thereon, children whom the teacher might otherwise punish for idleness or misbehavior are shown to be suffering from adenoid growths, nervous troubles, or hereditary taint of one kind or another.

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EDITORIAL ARTICLES.

CONSERVATISM IN THE ACCEPTANCE OF NEW THEORIES.

One of the most remarkable changes in the American people, perhaps in civilized people generally, is the passing of conservatism. Within the memory of those who can speak of themselves as middle-aged, newness has been a decided disadvantage. At present it is rather an advantage. When the elevated road was built in New York few would use its cars, and the management even went so far as to hire persons to ride in them. Then a heavy snow-storm blocked the surface lines, and the prejudice was swept away. What a contrast to the experience of the subway!

The same psychologic tendency that renders it possible for automobile factories to run overtime and sell rather untrustworthy vehicles at a hundred per cent profit, and that makes any decided novelty a mine of wealth, has its expression in medicine. This is true both in a personal and in a scientific sense. The young man no longer has the difficulty in acquiring practice that his predecessor had, on account of youth alone, although the excessive overcrowding of the profession renders it difficult for any stranger to build up a practice, and, conversely, renders it a matter of constant exertion to maintain one once acquired. In the medical profession itself the same tendency is seen. Presiding officers are no longer elected nor are consultants called on account of seniority. Membership in medical societies is now practically open to all graduates, excepting in a few avowedly exclusive organizations, mainly of specialists.

In scientific opinion the same seeking after novelty is to be observed. It is hard for a young man to realize the extreme

prejudice which formerly existed against the new and untried, and in favor of what was the common belief of the profession. Fifty years ago men of good repute and exemplary conduct were expelled from county societies, not because they had embraced homeopathy, but because they considered it worth while to investigate the teachings of Hahnemann. To-day, lamb's wool that has been exposed to the emanated rays of radium is used as a therapeutic measure, externally, against tuberculosis, and even those who are skeptics do not reproach and certainly do not think of ostracizing the practitioners of a therapy which depends upon the imparting of the virtues of a substance to another substance.

Freedom from prejudice against the new marks an important professional advance. Yet we must not forget that a prejudice in favor of the new, simply because of its novelty, is quite as irrational and even more apt to lead to error than a prejudice in favor of that which is supposedly, at least, established by experience. It is a good thing that the young doctor is appreciated at his true value, but by no means right that the mature but still progressive and active veteran of sixty feels impelled to shave off his beard and affect a preternatural sprightliness in order to retain the clientele of the younger generation of families that belong to him by right of years of loyal ministration.

In scientific matters the same tendency toward novelty manifests itself. For instance, it is scarcely more than a decade since the existence of antitoxins was unknown to the profession. To explain the various phenomena of immunity a very complicated hypothesis has been elaborated. This hypothesis is, from our present standards of knowledge, incapable of proof, and it has not received the corroborating support which other scientific theories have. There is no probability that we shall ever have a microscope that will render a molecule visible, much less that we shall ever have instruments capable of directly measuring and weighing them. Yet the molecular-atomic theory is corroborated by so many investigations along independent physical and chemical lines that it is almost inconceivable that it shall ever be controverted or considerably modified. Ehrlich's side-chain hypothesis, on the contrary, has been proposed simply as a working hypothesis, and is so understood by real investigators. Certain parrot-like students with a craving for novelty have, on the contrary, accepted it as definitely established, and have ridiculed those who have adhered to old-fashioned explanations or who have been reluctant to accept the new hypothesis until further proofs have

been received. We offer no opposition to this theory, but we might point out that it possesses the same inherent defect as the old and now much ridiculed explanation that a disease exhausts the soil against its subsequent development. Both hypotheses postulate that substances exist more or less permanently in the blood which have no strictly physiologic function, but which react with products of infection which the body may never encounter, and for which we can scarcely comprehend its being prepared. The newer hypothesis bears to the older the relation that addition does to subtraction, but in general it is just as conceivable that the growth of a disease germ removes from the body something not essential to the latter but requisite for the former as that a new composite substance is produced which plays no ordinary physiologic rôle, but which remains for a greater or less time to prevent the subsequent growth of the same germs. Indeed, when we consider solely those diseases whose attacks regularly cause a subsequent lifelong immunity, it is easier to imagine that some component chemical radicle of protoplasm has been permanently removed, than to suppose that such a substance has been formed which always remains in an active state but which cannot be eliminated. For the older theory we have a certain analogy in the secretion of the thymus, and later in life, in the ovarian and testicular secretion. On the other hand, there is absolutely no indication that a substance can be introduced into the body and there retained permanently, unless in a solid and inert state, as an encapsulated bullet or silver wire.

The conveyance of certain diseases by insect bites is another modern discovery, but one which deserves to be placed in a different category, as for the most part it has been definitely established by experiment. Still, it does not seem just to sneer at the survival of belief in other means of conveyance. For years the spread of yellow fever by fomites was taught by practically all observers, without thought of contradiction. But on the strength of a comparatively few exposures to yellow fever discharges with negative results, on account of the absence of stegomyiæ as intermediary hosts, the profession is not only asked but commanded, under pain of ridicule and being branded as an old fogy, to discard the old teaching as to fomites. We would hesitate to throw out of court the accumulated testimony of scores of experienced clinicians who have unanimously agreed, from a multitude of individual observations, upon the spread of yellow fever by fomites. The negative experiments supposed to demonstrate the absolute

necessity of the intervention of the mosquito are small in number. Again, the fomites were too foul for satisfactory experimentation. The yellow fever germ has not been discovered, and we can prophesy little as to its characteristics, but it seems to be rather a delicate, short-lived germ, and we may readily imagine, by analogy to the destruction of various other disease germs by saprophytes in cesspools, etc., that the yellow fever germs were actually prevented from reproducing the disease by the very filthy condition of the fomites used in the experiments.

Of late years a marked tendency has shown itself to return to the early view of tuberculosis as a constitutional disease. No one, of course, can now doubt the etiologic importance of the tubercle bacillus, and, as a matter of logic, we must all admit that there can be no true tuberculosis without the bacillus. Still, tubercles have been experimentally produced by extracts from the bacillus, and we clinically recognize a state of depraved nutrition which invites tuberculosis almost inevitably in certain circumstances; and, on the other hand, a hearty state, with abundant nitrogenous metabolism, which almost certainly resists the tubercle bacillus. In passing we may remark that tuberculosis is almost the only constitutional germ disease in which the bodily state has any marked influence on the effective lodgment of the germ.

Any number of instances might be cited of the tendency of the medical profession to be carried away with enthusiasm over novel discoveries. It is inevitable that the greater amount of original research work must be performed by men comparatively little experienced in clinical medicine. Thus, in many instances, valuable researches lack the qualification of a ripe and wide experience, or they may be made by men who are almost absolutely ignorant of medicine, excepting one special line of medical chemistry or biology. Ignorance is always very sure of what it thinks it knows, and equally contemptuous to what an opponent thinks he knows. We must be equally on our guard against the ignorance of the broad, superficial man who is hurrying through life, and that of the narrow, deep-delving man who sees nothing outside his own ditch. Generally speaking, the fallacy of novel claims in medical science lies not in the falsity of the new as in the claim that everything formerly believed is false. There is always the temptation to make simple, general, exclusive statements, but all human experience, and especially in medicine, is against the probability of a simple, uncomplicated explanation of

any phenomenon excepting of primal importance. Thus, while always ready to give attention to new claims and to believe demonstrated facts, it is wise to be a little skeptical as to unsubstantiated statements, and suspicious of those investigators who clear the ground for their own structure by tearing down the old one.

EDITORIAL NOTES.

Physical Efficiency and the Teeth.

That much in the way of physical efficiency depends upon the proper care of the teeth has recently been demonstrated by a large London firm. This firm employs at its works 2400 hands—men and boys, women and girls—and by way of insuring such efficiency as is born of good health, engaged a dentist to look after their teeth. The managers of the company state that since the employment of a dentist to care for the teeth of their employees the work turned out has been of much higher grade than before. We can well believe this, and the plan is one that ought to commend itself to all large employers of labor. Apart from the benefit to workers themselves and to those who employ them, such a plan, if general, would do much to bring home to the working and other classes how important a part teeth play in the preservation of health. A somewhat similar plan has been inaugurated in a number of the public schools in Germany, and since its introduction there has been a marked improvement in the general health of the children who attend.

The Chicago Stock-yards.

The question of pure food is a vital one, and only this year did Congress see fit to pass a law making for the betterment of food sold to the public. Recently a novel has appeared which claims to show the lax methods in vogue in the Chicago stock-yards. These yards were some time ago severely condemned by a commissioner sent to this country by the London *Lancet*. It is claimed that the government inspectors allow all sorts of diseased cattle to pass into the public supply. It is bad enough that the public should be at the mercy of the so-called beef trust in the way of high prices, but when they have tainted meat given them it is high time that strenuous efforts be made to insure a proper standard of meat inspection.

ITEMS AND NOTES.

NEW YORK estimates that there were 10,000 still-births in the State during 1905.

THE epidemic of typhoid fever in Pittsburg has assumed very alarming proportions.

THE National Quarantine Bill with amendment was passed by the House of Representatives on April 16.

THE fifteenth International Medical Congress was formally opened at Lisbon, April 19, by the King of Portugal.

DR. FRANCIS J. QUINLAN, of New York City, has received the Laetare medal for this year of Notre Dame University of Indiana.

KOLHAPUR CITY, Bombay Presidency, India, has a new medical magazine known as the *Hospital Assistant*. Dr. Raghunath Vaman Bapat is the editor and proprietor.

EPIZOÖTIC LYMPHANGITIS is devastating the stables of the south of Ireland, and has stopped hunting for the time. It was introduced into the country by the horses of a battery from South Africa.

THE Senate Committee on Public Health has reported favorably the Stevens-Wainwright bill providing that patented medicines containing alcohol or narcotics be labeled, showing their ingredients.

THE effectiveness of the sanitary régime on the Isthmus is shown by the fact that in spite of the existence of yellow fever in neighboring ports on both the Caribbean and Pacific sides there are no cases of the disease along the canal route.

DR. J. H. WHITE, of the Public Health and Marine Hospital Service, has been presented with a silver service by a large number of the citizens of New Orleans in recognition of his services to the city during the recent yellow fever epidemic.

THE New York State Commissioner reports to the State legislature an increase in insanity. In 1892 there was one insane person to every 339 people; now there is one to every 229. There are 27,406 insane persons in State and private institutions.

The working library of Professor Meissner on internal medicine, and a botanical library of three hundred or more volumes, consisting mainly of old and classical works on herbs, have been donated to the Newberry Library, Chicago, by Dr. Nicholas Senn.

The Chicago Tuberculosis Institute was recently incorporated by Drs. Edward B. Bicknell, Arnold C. Klebs, and Henry B. Favill. It is the intention of the organization to establish a free dispensary, to collect statistics, and carry on an active educational campaign.

A society for the propagation of cremation has been founded in Belgium. Its aim is to obtain legal recognition of the practice as an optional mode of disposing of the dead. It will also endeavor to educate the public mind on the subject by popular lectures, journals, tracts, expositions, and other means.

Among the members of the medical profession in foreign countries who have died recently are Dr. Luigi D'Amore, lecturer on experimental pharmacology in the Medical Faculty of Naples; Dr. Aubenas, formerly professor in the Medical Faculty of the University of Strassburg, aged seventy-six.

The University of Berlin has instituted a course of lectures on the study of alcoholism. Every phase of the question is to be considered, including the influence of alcohol on the intellectual development of the young, its relation to insurance, its connection with state hygiene, and the relation of alcohol and the penal code.

Swallowed foreign bodies may, according to Blair Bell, be rendered harmless in their passage through the intestine by the administration of a quantity of absorbent cotton plucked into small shreds and given in bread and milk. The foreign body becomes enveloped in the shreds of cotton, so that any sharp angles are covered over and injury to the intestine is avoided.

The Hungarian government has authorized the Hungarian delegates to the fifteenth International Medical Congress at Lisbon to extend an invitation to hold the sixteenth congress in 1909 in Budapest. The Hungarian government has allowed a sum of $25,000 for covering the expenses, and the same sum has been voted by the General Assembly of the city of Budapest.

THE American Mosquito Extermination Society held its third annual convention on April 11 at the New York Aquarium, says the *Medical Record*. The delegates present considered the question of mosquito extermination and adopted a succinct form of statement concerning the habits and varieties of mosquitoes and the best means of combating their multiplication. This is intended for distribution among the members of the society.

TRAVELERS to the Orient are not infrequently discommoded by a form of dermatitis ascribed to contact with freshly lacquered objects, says the *Medical Record*. From Cambridge, Mass., comes a description of an apparently somewhat similar affection occurring among the workmen in a local furniture factory. The men were at work on a large quantity of a peculiar wood termed tonquin, which had been imported from the Philippines. Those who inhaled the dust or handled the wood suffered from asthmatic attacks and an irritating rash on the exposed surfaces of the body. Twenty-eight employees were affected.

A BUREAU has been established in Germany the function of which is to supply foreign students and visitors with all the information they may require as to university lectures and courses of practical instruction. Its headquarters are at the University of Berlin, and the scope of its operations embraces all public institutions of the German empire as well as of other countries. Applicants will be informed as to all the steps required for obtaining admission to universities, or for attendance on lectures; they may also learn all about schools, laboratories, museums, libraries, hospitals, and art galleries. Dr. W. Paszkowski is head of the bureau. No fees are charged.

THE opening of the new medical college for Chinese medical students at Peking seems, as described by a correspondent of the *British Medical Journal*, to have been rather a striking ceremony. It was performed by Na-Tung, president of the Chinese Foreign Office, accompanied by mandarins and many other important Chinese officials. The new college is the outcome of the combined efforts of the various Protestant missions in Peking, but is to devote itself to science alone. Its organization is complete, there being a faculty of nine members, with Dr. Thomas Cochrane, medical officer of the Chinese maritime customs, as dean, and thirteen lecturers drawn from the various missions and medical establishments in Peking. The arrangements

include a hospital, as well as lecture-rooms and laboratory. The medical course is to last five years, the students being obliged to pass an entrance examination in Chinese, English, and preliminary science. There is provision for eighty students, and applications from two hundred are stated already to have been received. The final examination is to be held by an international board, and it is hoped that the successful graduates will be useful in setting up similar centers for the teaching of Western medicine and surgery in other parts of the Chinese empire. One-third of the expense which has at present been incurred has been covered by contributions from the Dowager Empress and court officials.

Prof. Pierre Curie, the discoverer of radium, was run over and killed in Paris on April 19. Professor Curie was the son of a physician, and was born in Paris in 1859. He was educated at the Sorbonne, and was given a chair in the School of Chemistry in Paris in 1895. Together with his wife, who was professor of physics in the Sevres High School, he spent several years investigating uranium and thorium, and in 1898 they were able to announce the discovery of a new and strongly radioactive substance in pitchblende. In 1901 M. Curie received the La Caze prize of 10,000 francs from the French Academy of Sciences, and in 1903 the couple were awarded the Nobel prize for chemistry, followed shortly afterward by the sum of 60,000 francs as part of the Osiris prize of France, all in recognition of their work on radium.

On March 27 two petitions were presented to the German Reichstag praying that the practice of vivisection may be surrounded by certain restrictions. It is suggested that special committees should be established whose duty it should be to regulate experimentation on animals. The petitioners ask that notice of any experiment should be given in writing beforehand; that experiments for purposes of instruction be forbidden; that animals of highly organized species—such as cats, dogs, apes, horses, asses, goats, etc.—should be employed for the purpose only in exceptional cases; and that vivisections should not be performed in hospitals or clinics. Professor von Bergmann pointed out that vivisection was based on a purely humanitarian purpose, and deprecated exaggerations such as were contained in the petitions. The House passed to the order of the day.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Spinal Anesthesia by Magnesium Sulphate.

Referring first to the already published work of Mettzer and Aner on the anesthetic action of magnesium salts, H. A. Hanbold and S. J. Mettzer (*Journal of the American Medical Association,* March 3, 1906) relate the histories of seven cases in which magnesium sulphate was employed, in solution, by intraspinal injection to produce surgical anesthesia. Though the doses were smaller than those used with safety in monkeys, they found magnesium sulphate in intraspinal injection as efficient an anesthetic in man as it had been found to be in animals. Even so small a dose as one cubic centimeter of the 25-per-cent solution to 25 pounds body weight is capable of causing complete anesthesia and paralysis of the lower part of the body, though not until two or three hours after the injection. In the case in which the largest dose, 18 cubic centimeters, was used the leg was operated on under complete local anesthesia forty-five minutes after the injection, and about three hours later a deep general anesthesia set in and lasted for many hours. In all cases a rise of temperature was produced, but it was perfectly benign, and disappeared in from thirty-six to forty-eight hours. The pulse was always of good quality. Vomiting occurred in most cases, but as a rule postoperative vomiting had only the characteristics of regurgitation (no contraction of the abdominal muscles). Urinary retention lasting from twenty-four to forty-eight hours occurred in most cases, and the bowels also had to be assisted by enemata. Washing of the spinal column by withdrawal of a few cubic centimeters of the intraspinal fluid and injecting an equal amount of sterile salt solution seemed to prevent after-effects.

The authors say: "As far as seven cases permit any conclusions, the following statements may be made: Intraspinal injection of magnesium sulphate is capable of producing anesthesia, and if carried out with caution seems to be a safe anesthetic. The following plan would seem the best, at least for the present: To inject about one cubic centimeter of a 25-per-cent solution of magnesium sulphate for every 18 to 20 pounds of

body weight and wait about two hours. It is probable that by that time the analgesia will be sufficiently advanced to permit the performance of an operation on any part of the lower half of the body. A small dose of chloroform, however, should be administered to divert the patient's attention and to hasten and complete the anesthesia. Immediate washing of the spinal cord should follow the operation in all cases." Further experience will be needed before it is possible to say whether or not the method will serve for general anesthesia in operations on the upper half of the body. The necessity of having the salt chemically pure and the solutions sterile is self-evident.

A New Operation in Degeneration of Nerve Trunks.

D. Gersuny (*Lancet*, March 17, 1906) has suggested a novel way of obtaining compensation for loss of function of certain motor nerves by suturing the muscle, the nerve of which was destroyed, to another muscle having a different nervous supply, with the object of bringing about innervation of both muscles by one nerve. A man who had suffered from acute pain in the left shoulder-joint had slowly but steadily lost control over certain movements of the arm, so that after five months he was unable to lift it. The galvanic and faradic reaction of the circumflex nerve showed that it had undergone total destruction (neuritis?), so that the deltoid muscle was rendered useless. Dr. Gersuny in the operation exposed the deltoid and trapezius muscles by a long incision from the side of the neck over the acromion down to the arm. The insertions of the trapezius and deltoid on the scapula were divided, the deltoid was pushed underneath the trapezius, and they were fixed together by strong sutures. After the closing of the wound in the skin, the arm was bandaged at a right angle to the thorax in the position of abduction, and two weeks after the operation the arm was subjected to a faradic current; massage and active and passive movement were soon applied, and after three months the patient could lift his arm well. Seven months after the operation the arm could be as easily moved and used as the sound one. The deltoid muscle contracted with the trapezius, but the circumflex nerve did not respond to faradic irritation. The contraction of the deltoid was normal by voluntary action. The application of an electric current caused only a slight contraction. The spinal accessory or eleventh cranial nerve had therefore partly replaced the circumflex nerve in its action.

The Diagnosis of Surgical Conditions of the Upper Urinary Tract.

J. B. Clark (*Medical Record,* Feb. 17, 1906) emphasizes the misuse of the cystoscope. He says that the ureter-catheterizing instrument should never be used until its employment has been indicated by the simple prismatic cystoscope. He gives his reasons from two standpoints: (1) That of the patient's comfort, the importance of which is to be considered; (2) from the standpoint of the operator, that the simple cystoscope is more readily sterilized, easier both to handle and to introduce, and in strictured or small urethras is, in fact, the only cystoscope that can be introduced. It gives a clearer and larger field of vision, rendering it possible to make a more accurate interpretation of the conditions. The knowledge gained by this instrument may be sufficient for the diagnosis; if the bladder is the seat of the trouble it will be unnecessary to collect the separate urines, and in that case the use of the ureter-catheterizing cystoscope is contraindicated. If, on the other hand, the lesion lies in the urinary tract, higher up than the bladder, and the secretion of the individual kidneys is required for analysis, or it is advisable to probe the ureters to determine their patency, or to advance a styletted catheter to get an *x*-ray picture, the real indication for the ureter-catheterizing cystoscope exists. In proper cases its use is crowned with the happiest results.

MEDICINE.

Clean Air.

T. Mitchell Prudden (*Medical Record,* Feb. 3, 1906) calls attention in his paper to the great importance of floating dust. Infectious material always depends upon microörganisms of some sort, and can pass only from one individual to another through the air as particulate bodies. It is known that the exhaled breath is practically free from germs, even in those suffering from communicable infectious diseases. Microörganisms are very apt to cling to some other form of dust particles. Their number varies with varying conditions. Generally speaking, out-of-door air contains far fewer microörganisms than that in rooms where men and animals congregate. It is interesting to note from the careful experiments which have been made that ordinary ven-

tilation, however effective it may be in supplying fresh air and in removing contaminated gases, has no noteworthy effect in the removal of dust, either floating or at rest. Experiments also prove that hanging garments out-of-doors merely is not to be commended. Unless such articles are brushed or beaten or shaken, or unless they flap violently in the wind, bacteria are not removed in great numbers.

The writer emphasizes the fact that a large part of so-called disinfection might be replaced to advantage with proper methods of sweeping, dusting, and mopping, if all these were not so simple and commonplace, and if every one could realize the significance of dust in the conveyance of infectious agents. He emphasizes the importance of the use of moist mops on the floors, and of moist dust-cloths on the solid furniture. He denounces the employment of the feather duster. The sprinkling of damp sawdust on floors before sweeping is a great aid in getting rid of much dust. He declares that the infectious diseases of the respiratory organs are steadily increasing, as people are more and more huddled together in offices, dwellings, traveling conveyances, and places of public assemblage. A large number of these diseases are directly traceable to infectious material passed off in spitting, coughing, and sneezing, by those suffering from various degrees of local disease. Promiscuous spitting should be stopped. The harmfulness of coughing and sneezing can in most cases be controlled by the use of the handkerchief. The writer sees no reason why health authorities should not as properly prescribe regulations for cleaning public conveyances and places of public assemblage, and compel their practice as strictly as they compel the sanitary disposal of sewage, secure pure drinking-water, and condemn noxious articles of food.

A New Method of Testing the Functions of the Digestive Apparatus.

Max Einhorn (*Medical Record,* Feb. 10, 1906) describes this interesting procedure. He attaches solid foodstuffs to glass or porcelain beads by drawing them through the opening in the bead and tying them on with a silk thread. Examination of the beads found in the feces will reveal the indigestible substances, while those which are digestible will have disappeared during their course through the gastrointestinal tract. In order to test

the work of the stomach alone, a thread is attached to the beads, which are placed in a gelatin capsule. At the end of from four to six hours the beads are withdrawn. By these two methods both the digestion in the stomach and in the bowel may be judged.

The writer sums up the results of his experiments as follows: In healthy individuals, catgut and fish-bones are digested in the stomach, whereas boiled or raw meat (beef), raw chicken skin, and raw as well as boiled potatoes do not disappear altogether in this organ. The muscles show a swelling and loosening of the fibers. Raw muscle fiber and chicken skin disappear in the intestines; tendons remain undigested. Raw potatoes show a varying condition, sometimes disappearing entirely, sometimes going through unchanged. Boiled potato usually seems to be digested in the bowel, but the skin of potato, raw or boiled, remains unchanged. Fats with a very high melting point, such as lard, are not absorbed in the intestine; suet and mutton fat are digested in the bowel. Fish-bone is not changed in the intestinal tract. If the intestinal functions are normal, albumin (raw meat) and starch (potato), boiled two minutes, and mutton fat will disappear during their passage through the digestive tract. Disturbances of these functions may be recognized by the reappearance of food substance attached to the beads. Raw thymus has been used to test the pancreatic function. When the intestinal and pancreatic functions are intact, the thymus will disappear.

Etiology of the Hemorrhagic Diathesis.

Wm. W. Carter (*American Medicine*, March 24, 1906) classifies the subject as follows: (1) Infectious diseases and toxic conditions as etiologic factors. (2) Cachectic conditions. (3) Purpura hemorrhagica. (4) Hemophilia. Malaria is one of the most important causes of the hemorrhagic diathesis. The hemorrhagic diathesis is also sometimes developed in such cachectic conditions as pernicious anemia, leukemia, scurvy, chronic nephritis, syphilis, and diseases of the liver attended by accumulation of bile in the blood. Mechanical defects in the circulation, as in valvular disease of the heart and senile purpura due to atheroma of the vessels and retarded circulation, induce a tendency to bleed. Among toxic agents causing this condition may be mentioned phosphorus, antipyrin, mercury, and chloroform. Purpura hemorrhagica forms the connecting link between the symptomatic hemorrhagic diathesis and the pure type of the

hemorrhagic diathesis or hemophilia. It cannot be classed under the head of hemophilia, as it is transient and not hereditary. Its cause is unknown. The true etiology of the affection is still unknown.

Cerebrospinal Meningitis.

Geo. C. Merriman (*American Medicine,* Feb. 10, 1906) makes a strong plea for more thorough examination of the spine in cases in children which appear to be pneumonia. He firmly believes that the enormous percentage of mortality in pneumonia among children has been due, in many instances, to unrecognized meningitis. In every case of acute lung involvement in children a careful examination should be made of the spine and neck and eyes. Pressure over the spine and at the base of the skull will bring out the tenderness in the cervical and dorsal regions. Examination of the eyes will sometimes, not always, show some inequality in the pupils, and the presence of photophobia. The finding of these symptoms in what appears to be pneumonia will put a totally different complexion on the case, and will change the entire outlining of the treatment. He reports at length a typical case which occurred in a child of six months.

Relation of Acid Fermentation in the Stomach to Neurasthenia.

J. W. Robinson (*American Medicine,* Feb. 24, 1906) does not believe that the statements of under-nourishment in neurasthenia are true. It has been shown that if the amount of oxalic acid eliminated daily is much increased, symptoms of irritability appear. A small amount of oxalic acid is taken in with the food, but an excessive amount is due to an acid fermentation in the stomach. When excessive amounts of oxalic acid are absorbed (probably as sodium salt) the nerves with other tissues have to suffer a loss of calcium, which has a strong affinity for oxalic acid. This produces a disturbed ratio of salts in nerve tissues, resulting in increased irritability. In regard to treatment diet and hygiene stand first. Fermentable foods, as sweets and possibly starchy foods, must be restricted. The use of lime water furnishes calcium in the alimentary canal to unite with the oxalic acid and saves the vital tissues.

The Early Diagnosis and Aggressive Treatment of Pulmonary Tuberculosis.

John B. Hawes (*Boston Medical and Surgical Journal*, April 5, 1906) says that by waiting until the diagnosis of tuberculosis is proved by the demonstration of tubercle bacilli, those in charge of out-patient clinics are sometimes responsible for the death of the patient. Careful temperature records by the patients themselves, the use of tuberculin, mensuration, and spirometry assist the examiner to recognize the disease in the closed stage—*i.e.*, before bacilli appear in the sputum. Of supreme importance, both for the early diagnosis and efficient treatment of these cases, is an aggressive personal interest on the part of the physician in charge; he must himself take the initiative, educate and encourage the patient, and hustle for his future good, even when the patient himself is listless and indifferent.

Transmission of Syphilis to Apes.

Weisser (*Fortschritte der Med.*, 1906) carried on his experiments in Batavia in order to have the animals in their natural climate. He employed orang-outangs, gibbons, and macaques. The course of the transmitted infection was somewhat modified by diseases of captivity, but the results obtained were remarkable. The incubation period varied from fifteen to sixty-five days, depending on the freshness and quantity of material used for inoculation, which was taken from the human in different stages of the disease. Blood did not transmit the condition. Inoculation from animal to animal was successful with material from chancres, glands, testicle, cord, and spleen, and was produced by scarification. Gibbons were the only ones to show secondary symptoms.

THERAPEUTICS.

Treatment of Diphtheria.

G. Gaspar (*British Medical Journal*, April 14, 1906) publishes some observations on diphtheria, based on 150 cases treated by him in the past two years. His mortality was 7.33 per cent. No large doses of serum were given, never more than 6000 units. In addition to serum treatment, he used a local application of nitrate of silver for painting on the throat and

a mixture of lead lotion and carbolic for the glandular enlargement; sprays and gargles were also used. The bulk of his remarks are, however, directed to a strong plea for intubation as against tracheotomy. His results with tracheotomy were unfortunate, for out of the three cases tracheotomized, all died. Of the chief difficulties met with in intubation (hemorrhage, glottic edema, vomiting, and glottic spasm), glottic spasm is perhaps the most obstinate at times. Syncope never occurred during the operation. Occasionally some difficulty is found in removing the tube, and in these cases Bayeaux's methods of enucleation by means of the thumb at the point of the cannula in the crico-thyroid space, the child's head being extended and then rapidly fixed, may be useful. As a general rule, the tube was kept *in situ* from three to five days, but there are exceptions, just as there are with regard to the possibility of discarding a tracheotomy tube. Although intubation, in the author's opinion, is essentially to be preferred to tracheotomy in hospital practice, he admits that in private practice tracheotomy may in some cases be more advantageous. For there are accidents in connection with intubation—for example, sudden mechanical obstruction from blocking or dislodgment of the tube—which call for immediate and prompt attention.

An Antiserum for Exophthalmic Goitre.

S. P. Bube (*Journal of the American Medical Association*, Feb. 17, 1906) reviews the previous experimental studies of thyroid cytolysins, showing that they furnish an unsatisfactory basis for clinical application, and then gives his own results. He remarks that in nearly all cases the serums prepared have been taken from animals of a different species from those on which experiments were made, and lack morphologic specificity. His own serums were developed by using the nucleoproteids instead of the whole organ ground into pulp, and his success with hepatotoxin and neuphrotoxin thus produced led him to attempt to prepare a serum which would have a cytolytic action on the human thyroid gland, and thus be of therapeutic value in inhibiting its hyperactivity in exophthalmic goitre. His first experiments were with two thyroids from fatal cases of the disease, and he isolated in pure form the nucleoproteids and thyreoglobulin, and a mixture of the two was injected into rabbits.

intraperitoneally at intervals of five days; the rabbits were bled on the eighth day after the injection. The serum obtained produced effects which, he thinks, are more than mere coincidence, and while he does not think we have yet sufficient data to enable us to give a positive intelligent opinion on some points, and does not claim that the serum is specific, he holds that we have a certain amount of clinical evidence backed up by experimental facts and analogies worthy of consideration. Some more clinical experimentation will have to be made, cautiously, on account of the possible dangers of the method. He says that at present there is just sufficient light to intensify the darkness.

Salicylate of Sodium as a Preventive of Erysipelas.

At a recent meeting of the Paris Society of Biology, M. Jacob and M. Vitry (*Lancet,* April 14, 1906) communicated a paper in which they stated that in three series of experiments they had been able to show that the intravenous injection of small and repeated doses of salicylate of sodium raised the resistance of the rabbit to consecutive inoculations of a culture of streptococci. One rabbit inoculated with a highly virulent culture after being treated with salicylate died at the end of five days, although the control died in three days. With a culture of feeble virulence the animal treated with salicylate of sodium presented no local lesion at all, although the controls were attacked with erysipelas.

GYNECOLOGY AND OBSTETRICS.

Some Obstetrical Methods Practiced in the Philippines.

Wm. D. Bell (*Medical Record,* Jan. 27, 1906) says that the belief that women of semicivilized races escape many of the pangs of childbirth is certainly erroneous regarding the Philippine natives. The life of the Filipino woman is comparatively short, due to her many pregnancies, much manual labor, insufficient food, and most of all to the crude, brutal, and ignorant practice employed as obstetric aids. The two chief procedures used to facilitate expulsion of the fetus consist, first, in a stout band of cloth passed about the woman's abdomen and pulled tight by four persons, who are seated, two on each side of the patient, with their feet against her body, and secondly, in a

plank six or eight feet long by a foot wide, which is placed across the woman's abdomen, while another person, mounted on the plank, rises on his toes and lets the heels descend forcibly. The birth of the child is followed by the expulsion of the placenta by the above means, and should the process be delayed, forcible traction on the umbilical cord is made to such an extent as to tear away portions of the placenta, and often large sections of this body are left to find their way from the uterine cavity of their own accord. Weeks, even months, later the results of such practice are noticed in the septic conditions which would naturally follow retention of the membranes. The author gives some statistics showing the frequency of complications attending or following this crude midwifery, and then describes a case of imperforate hymen in a young girl. On account of the tumor caused by the accumulated blood she was supposed to be pregnant, and was subjected to both the cloth and the plank treatment. She was then brought to the author, who incised the occluding membrane and liberated two quarts and four ounces of thick, offensive menstrual blood.

Gynecological Surgery of the Insane.

Le Roy Brown (*Annals of Gynecology and Pediatry*, March, 1906) says that if the operation when needed has been properly done and the patient is not mutilated by an uncalled-for castration, the mental condition is never aggravated by such a procedure. This, as stated, has been the experience of Manton, who has been operating for over twenty years; also that of Picque, whose operations have extended over a period of twelve years; and of himself in the entire range of his surgical work among the insane. There exists among the patients confined in the various asylums many pathological conditions which can and do give rise to symptoms detrimental to the patient's physical well-being and mental recovery. Those with such conditions have a right to be given relief irrespective of their mental state. Under the stimulus of the improved somatic state resulting from surgical relief, some of the patients show greater mental advancement under the moral and therapeutic care than were shown before such relief was given. At times this improved mental state continues to one of recovery. The primary object of surgical operations upon the insane should be to improve the

physical status of the patient with one end only in view—of relieving them of physical suffering and nervous disturbance. If as a result of this relief they are mentally improved, it is a sequel not directly sought, yet welcomed.

Artificial Dilatation of the Gravid and Parturient Uterus.

C. E. Zeigler (*American Journal of Obstetrics,* March, 1906) says that in choosing a method of dilatation one must consider (1) the condition of the cervix and os; (2) the urgency of the case; (3) the irritability of the uterus as expressed by its response to certain stimuli. He believes that the operation is always a serious one, and may be dangerous. It should, therefore, be undertaken only by a skilled vaginal operator, with competent assistance and good surroundings. In cases in which vaginal hysterotomy is the operation of choice it will not always be possible to carry it out. In such cases preliminary dilatation with Bossi's dilator to the limit of safety, followed by metreurysis with firm continuous traction, will give better results than Duhrssen's operation under favorable surroundings, and will be efficient in most cases.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Chronic Non-suppurative Affections of the Middle Ear.

Thomas J. Harris (*New York Medical Journal,* April 14, 1906) draws the following conclusions: (1) That the nose plays an important rôle as a causative factor in many cases of otitis media, but by no means in all cases. (2) That the lesion in the nose is usually of an obstructive nature, acting as an obstacle to proper ventilation of the middle ear. (3) That in beginning cases of hypertrophic otitis media a certain amount of improvement in the hearing can be confidently expected by restoring proper ventilation of that cavity through measures addressed to the nose, with the aim of relieving nasopharyngeal

and tubal inflammation; but that (*a*) only such cases of the disease call for nasal treatment as show pathological changes in the throat, themselves demanding attention apart from the condition of the ear; (*b*) that it is important to determine the true nature of the process in the middle ear, as the sclerotic or so-called hyperplastic form is not influenced at all by such treatment; and (*c*) that adhesive changes and ankyloses cannot be expected to yield, however completely the nasal obstruction is removed. In a word, that while suitable cases are capable of being helped, many cases of chronic otitis media associated with certain nasal obstructions do not call for and will not be improved by any form of nasal treatment, and that all such treatment in these cases is unjustifiable and unwarranted. (4) That an important result to be secured by treatment is the relief afforded from the repeated attacks of acute rhinitis, which by their effects on the Eustachian tube are wont to aggravate the chronic condition. (5) That tinnitus aurium and vertigo at times are benefited by nasal treatment. (6) And finally, that because of the importance of treatment to the nose and throat a closer association clinically of otology and rhinology is urgently demanded.

Aspiration of the Tympanic Cavity After Paracentesis.

P. Friedenburg (*Medical Record*, March 3, 1906) in his discussion of this subject describes a procedure which he has followed for about six years. Immediately after the paracentesis is made he presses against the external meatus, hermetically plugging the canal, a small glass bulb about five-eighths of an inch wide, shaped like an olive with a very blunt tip. Suction is then applied and gradually increased until there is a flow of fluid from the middle ear and the glass bulb becomes more or less filled. The effects of this aspiration by energetic suction are most gratifying; pain is relieved; drainage is far more free. several drachms of fluid being often removed. The paracentesis opening does not have so great a tendency to become closed. The removal of inflammatory exudate from the middle ear and the dilution of the contents with blood serum also work against septic clot formation. In the case of very young children and infants, especially when there is doubt whether the drum has been properly opened or not, the application of suction will immediately settle the question.

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

THE SIGNS AND PATHOLOGY OF PLEURAL LESIONS.

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My purpose in the present paper is to correlate the symptoms, both subjective and objective, with the pathology of pleural lesions, by a brief discussion, by certain diagrams, and by a series of gross specimens. The best way to bring the subject before you is to pass the chief diseases in review, and for the time I must limit myself to inflammations.

Normally there is no pleural cavity, for the two layers are everywhere in contact. For the extension of inflammations it is important that these two layers are everywhere in motion, except at the root of the lung. Only when some pathological product has separated the two layers do we have a pleural cavity; up to that time it is only potential.

The mechanism which keeps the layers in contact is the interpleural tension; this in health is always negative, varying from —6 to —8 mm. of mercury.

Normally the two serous surfaces move over each other practically without friction. This is possible only so long as the integrity of the investing endothelial cells is preserved. In acute pleurisy without effusion, one of the first changes is swelling in the subendothelial fibrous tissue with increase in size of the endothelia, and granular degeneration of these, followed by desquamation. From the swelling the two roughened surfaces are pressed together more firmly than normal, and they stick and drag upon each other, since they can no longer glide smoothly. Hence the patient feels a quick pain in the side, which he describes as a stitch, that grows more severe upon movement and deep inspiration; partly because more of the tender surfaces glide over each other and they are more firmly pressed together, and partly because the movement of the chest wall stretches the swollen area.

In a short time the serum of the blood in the dilated capillaries

begins to ooze toward the surface of the pleura, and there it meets a fibrin ferment derived from the dead endothelia and coagulates. Now the raw surfaces are covered by a thin layer of fibrin, which is somewhat sticky, and hence the pull of one sore area upon the other is worse.

In consequence the patient limits his breathing as much as he can, and bends toward the affected side to put the parts as nearly as possible in a state of physiological rest. This is a necessary condition for healing, but it brings with it the risk that the adhesions may become organized between the two layers and a permanent band of new connective tissue replace the temporary fibrin.

From the reflex along the intercostal nerves, spasm of the intercostal muscles, and diaphragmatic cramp, the whole side may be tender and painful. The intensity of these combined pains varies from trifling to extreme, and their site may be local or referred to distant points, as above the clavicle, the navel, or the inguinal fossa of the affected side. Yet another reflex is cough, dry and painful in character, and suppressed as nearly as possible. Owing to the pain the respiration is also controlled, shallow or jerky, and more abdominal than thoracic.

Constitutional symptoms are usually slight. Fever may be absent in a mild case, or run as high as 101° F., but it depends in great measure upon the extent of the lesion and the cause. If the disease be bacterial, the particular kind present modifies the fever. When the pleurisy accompanies a lobar pneumonia which reaches the surface of the lung we find the pneumococcus, and sometimes this is found without the pneumonic lesion. With bronchopneumonia the organism is commonly the streptococcus. Occasionally the staphylococcus, the bacillus coli, the bacillus of Friedlander, and others cause the disease, and both as a primary and as a secondary lesion the tubercle bacillus is responsible for a large number. As a general rule all the constitutional symptoms, including nausea and vomiting, fever, depression, and in children convulsions, are more distinct with the pus organisms and extensive lesions.

In a localized form the disease occurs at the apex with tuberculosis, or between the lobes of the lung, and may not be diagnosed, or over the cup-shaped base of the lower lobe on the diaphragmatic pleura. In the latter case the pain and the diaphragmatic spasm may be the only local signs, together with abdominal breathing, and the resemblance to peritonitis is very close.

Physical Signs.—The affected side displays a diminished expansion, and this may be recognized in three ways: (*a*) By inspection from above and behind the patient. This is equivalent to examining a cross-section of the chest, and is so valuable that it ought to

be part of our unconsious routine in every examination of the chest. (*b*) Palpation of the two sides with the flat hand. The entire palm and fingers should be placed at exactly corresponding points on the two sides at the same time, while the patient takes as deep a breath as he can. (*c*) The cyrtometer. The expensive instruments are not necessary. Two flat pieces of lead joined by a piece of stout rubber tubing serve the purpose. With the rubber junction over the spine, the lead bands are brought around on a level and closely molded to the chest, and the ends crossed in front. Upon the ends a mark is made where they meet in forced expiration, and another in deep inspiration, and they are then removed. A tracing of the two on paper, with a rather soft pencil, will give the outline of the two sides and the amount of expansion on each. The only thing it does not show is the local lagging when one part, usually over the lesion, expands slowly and irregularly, but this is noted by the eye and can be marked upon the diagram. Such a measurement will give accurate results, even when the chest is deformed.

As a rule there is no marked change in the percussion note, unless the area is large and the exudate thick, and usually this combination is found in the chronic pleurisies. The note would be a little duller than normal, and the breath and voice sounds less distinct.

Friction sounds are among the most valuable physical signs. The sound varies from the lightest grazing to a creaking such as made by a new leather saddle, at times a veritable squeak. At this point I should like to put in a plea for the regular employment of direct auscultation as well as the stethoscope. With the ear on the chest, or only a thin, smooth fabric between, we can appreciate certain characters even better than by the indirect method.

Certain qualities are common to all friction sounds, namely, they give the impression of nearness, of being both very superficial and very local; they occur most plainly where the movement of the pleural surfaces is free, as below and to the outer side of the nipple, in the lower axilla, and near the angle of the scapula; they do not shift when the patient changes his position, are not altered by coughing, and are more marked on deep inspiration. While heard best during inspiration, they may last over into expiration; and by pressing the stethoscope against the chest the sound becomes clearer and greater tenderness is observed. At times the jarring of the chest, as the uneven pleuræ rub together, is so decided that the flat hand may feel it, and this is called friction fremitus.

From such an acute dry pleurisy the patient usually recovers in two or three weeks. But we should remember the late effects of such a lesion, mainly three: (1) Adhesions which are left between

the costal and the pulmonary pleuræ may conduct voice and breath sounds even through fluid in a later attack, and these patients seldom escape with but one. (2) The pull of such adhesions upon the lung may distend the alveoli and cause a local emphysema, which will modify the percussion note of the region permanently. (3) With extensive and thick adhesions, deformity of both the lung and the thorax is almost inevitable.

Pleurisy with Effusion.—Like the former disease, this lesiou is sometimes primary and sometimes symptomatic with various fevers and intoxications. Normally the pleural apparatus forms a lymphatic pump. A moderate flow of lymph passes froun the vessels of the two layers, first to the surface and then along the serous membrane to the root of the lung, the thoracic wall, and the diaphragm, in all of which places the stomata of the lymphatic vessels take it up. This fluid differs from the exudate in pleurisy in having a far lower specific gravity, a lower percentage of salts aud dissolved matters, and almost no proteid.

This fluid must accumulate when one of two conditions prevails: either that it is poured out in greater quantity or the pump is unable to act. Both of these factors enter in pleurisy with effusion, and the fluid is vastly different from that in health. The essence of the process is that it is an exudative inflammation, and that the fluid contains fibrin. The latter closes the mouths of the lymph vessels.

It is said that the amount of fluid must be in excess of twelve ounces before it can be recognized by physical signs. I question the accuracy of this view. I feel sure that we can recognize less than this, but, on the other hand, I have seen four quarts in one pleura go unrecoguized until the post-mortem.

As the fluid is poured out we get a pleural cavity, and this is of just the size and form assumed by the fluid and increases with it. The fluid has weight and is incompressible, hence it falls to the lowest part of the chest and compresses the nearest lung, as well as distending the sharp angle of the complementary pleural sulcus and pushing out the intercostal spaces.

The respiratory oscillatiou is lessened or absent, and the interpleural tension is diminished. Furthermore, especially when the lesion accompanies general fevers, like typhoid, the tone of the lung is decreased. By that I mean that some change takes place in its elastic tissue and smooth muscle fibers which makes the lung less resilient, and because of this change we get an abnormal percussion note over the lung affected.

Since the lymphatic pump depends in great part upon the respiratory movements, the point is soon reached, with such an effusion,

where it must cease. If now a small amount be removed, the pump is able to start anew and all the fluid may be absorbed. An expression of this is seen in the daily amount of urine passed by the patient. Before absorption the amount may be normal or less; with absorption it may rise as high as eighty ounces in the twenty-four hours.

Symptoms.—The onset may be latent or frank. The first is observed especially when the disease is secondary to some other, so that its own symptoms are masked; but too frequently "latent" is a polite way of saying neglected diagnosis.

In a frank onset the constitutional symptoms are more marked than in the dry form. There may be shuddering chills, high fever, more cough, and in the very young convulsions; the latter symptom depends upon the combined effect of the special toxin which is acting and the disturbances of the cerebral circulation.

The local symptoms may be preceded by all those given for the dry form, but the pain is commonly more severe, and referred to the region of the nipple, axilla, navel, or lumbar and elsewhere. The dyspnea may be more excessive. As the fluid accumulates the friction and pain are apt to diminish. This is not true of the dyspnea, but its character varies. Instead of being jerky, heaving, labored breathing, because it hurts to breathe, it becomes the quieter, more constant, and more cyanotic dyspnea of diminished air space and consequent excess of CO_2 in the blood.

On account of the pain and the dyspnea the patient usually lies upon the affected side, but it is interesting to note that the cases soon establish a tolerance. No one uses the entire lung all the time, and when the patient is quiet in bed he needs comparatively little. So we often see the dyspnea slowly subside, to return only on exertion, like sitting up, although the chest may be full of fluid.

I have seen a strong man of six feet and over, built proportionately, with both pleural cavities full, who was able to walk about his room with no subjective dyspnea, and I well remember how angry he was at his implied helplessness when I insisted that he should not walk to the hospital several blocks distant. He had been sick three weeks and had become accustomed to his fluid.

With lesions of either the lung or the heart the dyspnea reaches its worst expression, and, of course, does not disappear.

The fever is not distinctive. It tends to become quotidian remittent, and usually lasts as long as the fluid is present. One of the best indications that the fluid is being absorbed is a fall in the temperature. At the same time the local temperature of the affected side is one to three degrees higher than the other side. This is due to the fact that the vessels supplying the serous membrane supply

also the integument over it, and that when the inner surface becomes deeply congested and hotter the parietal branches dilate sympathetically and the outer surface is warmer.

Heavy sweats and a septic diarrhea may accompany this stage, especially when the toxin in the fluid is virulent. It is evident that the diarrhea is septic, for after death no corresponding lesion can be found in the intestinal mucosa.

Cough and expectoration are common, from a reflex congestion of the bronchial mucous membrane and consequent increase of mucus, and hence the sputa are simply frothy and mucous, unless from violent coughing little capillary ruptures occur, and then they may be blood-streaked. After puncture and removal of part of the fluid the sputa may become muco-albuminous. When the fluid escapes by way of the bronchi, as it rarely does, there may be a sudden and large discharge of serous coagulable sputa.

The pulse is often much disturbed in both frequency and rhythm with large effusions. Sometimes the radial pulse of the same side is almost or quite lost, and sometimes we have the pulsus paradoxus from great obstruction to air entering the chest. The signs in such a case are twofold, and result from physical examination and from study of the fluid; by the former we recognize that there is fluid and something of its amount, by the latter its character.

In what has been called the first or dry stage we find friction as before, but in addition we often have signs which strongly resemble bronchitis; among these are a high-pitched, muffled tone, resistance to the plessimeter finger, weak breath sounds, and a widely-diffused, sticky râle which has been called friction, but probably is not. I reach this view because it may be heard over a wider area than that of the fluid, and it is heard on inspiration; it is probably due to loss of tone in the lung and partial collapse. It is distinguished from a bronchial râle in being one-sided. Should pleurisy occur with bronchitis, then we have the signs of the latter in both lungs, and somewhere over one of them an apparent increase, more or less localized, due to the pleurisy.

Often the first signs are those of fluid in the most dependent part of the chest, and the position of the patient while the effusion is going on determines which that part shall be. While the quantity is small, the lung floats upon it, but as it increases the lung suffers compression. Now since the lung is a solid of three dimensions, fastened only at the hilum, but quite firmly fastened there, it takes a threefold direction under compression, upward, toward the middle line, and forward as the pressure increases, so that more of the lung comes to lie under the clavicle than under the scapula. Before such

general compression occurs the lower lobe has become almost or quite airless.

It is the tendency of the fluid to accumulate very quickly, for it has the force of the *vis a tergo* behind it, and the walls of the small vessels offer but little resistance to its passage out.

The dulness is partly due to the fluid, partly to the compressed lung, and partly to adjacent organs, and in large effusions these all merge. It begins usually at the lowest part of the thorax behind, but by the time it reaches the angle of the scapula the anterior upper part of the chest may give a high, even a tracheal, percussion note. Often the entire back is dull before much is noted anteriorly. Owing to the shape of the cavity the level of the dulness is higher in the axilla and behind than in front.

Now the quality of the percussion note may be absolutely flat, but often the compressed lung conducts quite well both to and from the trachea and larger bronchi, and hence the dulness may not be complete even with large amounts of fluid. And in the child, with resilient chest walls, we may even find a cracked-pot resonance. To obtain this best the patient's mouth should be open and the tongue forward, the stroke should be delivered during expiration, and the striking finger should rest on the other with a slight after-push.

It is further important to note that while with small amounts of fluid the level of the dulness may change with the position of the patient, when the quantity is large it cannot do so.

In direct proportion to the amount of fluid the side is enlarged, the diaphragm is depressed, and the mediastinum is displaced toward the well side.

1. The normal transverse diameter of the chest is related to the anteroposterior as 10:7.5, but with fluid this becomes altered. The shape is less elliptical and more circular. At this point the cyrtometer is of value, for measured by a tape we may not notice any increase in size. In becoming circular from elliptical, the cavity of the chest may be actually larger and yet the circumference of the side not lengthened. Moreover, the outside measurement is no guide to the amount of displacement of the mediastinum, and in an old patient, with rigid thorax, this may be the chief element in the increase of size. Usually we can appreciate the change by observation from above and behind the patient. The shoulder is raised, the spine curves slightly to the well side, and the chest bulges.

2. The depression of the diaphragm to any great extent displaces some of the abdominal viscera. On the left side the spleen moves both down and forward, along the costocolic ligament, so that its whole upper and anterior border may lie beyond the free

edge of the ribs. The left lobe of the liver is also depressed, and the three dulnesses of liver, spleen, and fluid merge to blot out Traube's area and replace the whole stomach tympany by dulness. Normally the anterior pulmonary resonance begins to be altered by the superficial cardiac dulness at the fifth space, and about two inches further to the left and below a deep percussion gives stomach resonance. Just below the sixth rib the stomach is tympanitic, and laterally at the eighth rib light percussion brings out the lowest pulmonary resonance. Behind, at the tenth rib, we pass into the dulness of liver or spleen with kidney. These landmarks all disappear as the arch of the diaphragm becomes flatter and the space is taken by fluid. On the right side anteriorly the deep dulness of the liver is met at the fourth space in the midclavicular line, and the superficial at the sixth rib. Where liver and cardiac dulness blend, we have Ebstein's angle. Two lines enter into the formation of this angle, the upper limb being a curve with slight convexity to the right, and the lower slanting upward slightly from the middle of the sixth rib to meet the former, at less than a right angle, just inside the right parasternal line. When the diaphragm is depressed by right-sided pleurisy with effusion, the vertical line is straightened and pushed to the left and the lower line becomes more slanting, and thus the angle is increased to or beyond ninety degrees.

A special word must be devoted to the displacement of the heart. The heart hangs from the most fixed portion of the aorta, just where it turns at the third dorsal vertebra to become thoracic. From here forward, along the arch, the attachment becomes less fixed, and the freest portion, from the first part of the arch to the cardiac apex, lies altogether within the pericardium. Consequently, with large fluid collection on either side, the heart as a whole rotates, not from the beginning of the great vessels as a fixed point, but, together with these structures, from the third dorsal vertebra; the widest range of motion takes place between the root of the lung and the anterior leaf of the pericardium, progressively as you go forward.

Hence, with fluid on the left side, the apex beat may be behind the sternum or over as far as the right nipple line, in any space from the seventh to the fourth. Here a caution should be given. Normally the conus pulmonalis lies behind the sternum. With a relatively small amount of fluid on the left side this structure may lie just beyond the edge of the sternum and its pulsation may be mistaken for the apex beat. When the fluid is on the right side, the apex may lie in the left anterior axillary line, at any space from the sixth to the second. In either case the upper mediastinum may

be dull on percussion because of the pleura and contained fluid bulging over across it.

Over the fluid we get no vocal fremitus. I desire to insist upon this, because the books do not seem to recognize the value of those cases in which bronchial voice and breathing over the fluid make us think of lobar pneumonia. The vocal fremitus depends upon the amplitude of the vibrations communicated to the column of air in trachea and bronchi, and passed through the lung to the chest wall. There they are felt by the flat hand. Now, when the lung is compressed, the lung is at a distance, and between it and the observer is the fluid, and the latter will not carry the ample vibrations of the voice, although it may carry the higher and shorter vibrations of the breathing. The vocal fremitus is of less value in women and children than in men, but if the woman be asked to prolong the voice in low-toned detonation it may be clearly felt, and with most children it is appreciable during crying. In a somewhat similar manner the lung modifies the voice at the level of the fluid, absorbing all but the overtones, and hence giving it a bleating quality, which we call egophony.

Yet another evidence of the inability of the pleural exudate and compressed lung to convey ample vibrations is found in Baccelli's sign — namely, whispering pectoriloquy is transmitted by serous fluid, when ordinarily pectoriloquy is limited to the lung. Still another appears from coin percussion: here an assistant percusses the anterior part of the chest with two coins while the physician listens posteriorly. Over the upper part of the chest the note is not heard, but through the fluid it is heard as a clear but distant musical ringing.

All these phenomena depend upon different conduction indices between the fluid, the lung, and the chest wall.

On auscultation over the fluid the voice and breathing may be absent, with less compression of the lung, and bronchial with more severe compression.

Over the compressed lung we have Skoda's resonance, tympanitic note under the clavicles, perhaps a cracked-pot or a tracheal note, with loud metallic râles and bronchial voice and breathing.

Either over the compressed lung or the fluid we may think of pneumonia, especially when the general symptoms are marked, but the following points will distinguish the two lesions: In pneumonia the chill is harder, the fever higher, the sputa more viscid and voluminous, we may have labial herpes and unilateral flushing of the face, the dulness is less resistant, both voice and breath sounds are increased, vocal fremitus is much increased, and we do not find the bulging of the intercostals and the displacements of the fluid lesion.

The aspiration needle also may be required to decide a doubtful case.

Other signs of pleural effusion are a systolic murmur over the pulmonary valve and flatness or prominence of the intercostal sulci. At rare times the serous fluid makes its way to the surface, and appears as a smooth, tense swelling, which grows smaller with inspiration and larger with expiration. This is found most often in the axilla, but is commoner with empyema than with serous fluid.

The Results of Puncture.—The composition of the fluid is of the greatest value in diagnosis. If serous, the disease may be simple hydrothorax or pleurisy with effusion, or the fluid may be purulent. As the specific gravity approaches 1.015, the probability of an inflammatory origin arises, and above that figure to 1.025, or higher, it is certain. The composition of the two fluids, averaged from a number of cases, is as follows:

	Specific gravity.	Proteids.	Fibrin.	Albumin.	Globulin.
Hydrothorax	1.005-14	1.774	0.0086	1.155	0.63
Pleurisy with effusion	1.020-30	4.82	0.048	1.87	2.00

The higher gravity of the inflammatory exudate and its larger proportion of coagulable proteids will clear up the diagnosis if there has been any doubt between it and hydrothorax. The fluid is seldom entirely clear; it may even be opaline or milky, from suspended fibrin and cells, and the amount of fibrin may be so large that it jellies on standing. There is usually some peptone and sugar, a small percentage of urea, and, with jaundice, bile pigment.

Empyema (Pyothorax).—The pus may be present from the first or be added to a serous effusion. This latter case may occur spontaneously, or be due to careless puncture. In children it is more apt to be spontaneous, and may occur in a few days to within three weeks after the fluid is first observed. With necrosis of a rib, sloughing of the membrane, abscess of the lung, carcinoma of the esophagus, and some other conditions, the pus may be fetid. Sometimes it is jelly-like, sometimes it effervesces from the contained gases. Rarely it is bloody, from the rupture of small vessels in the newly-organized adhesions, or with tuberculosis and diseases attended with hemolysis. Usually the amount of blood is small, but it may be large enough to cause anemic cachexia.

The general symptoms are always more severe than in pleurisy, and when the effusion is putrid we have the evidences of septicemia; these include dusky hue of the face, dry and brown tongue, a soft and weak pulse, mental stupidity, great muscular debility, and a disgusting odor to the sweat and breath. Often the joints are

swollen and tender, there may be an eruption like that of measles, the spleen is enlarged, and there is septic diarrhea. In the blood the white cells are in marked excess. The respiration is frequent and shallow; the temperature may run as high as 104° plus, and stay at a high level. What sputa may be present will not show the rusty and sticky qualities of the pneumonic expectoration. Often there is delirium or coma early in the disease, but the patient can usually be roused. Such a case is apt to end fatally within two weeks, whether an operation is done or not.

In general, with empyema we have the physical signs of fluid in the pleura, but there are some modifications. For instance, there is more distention of the superficial veins of the chest, and at times there may be edema in the wall. The thorax may be more enlarged as a whole, with more bulging of the intercostal spaces, especially in the child. Dulness and flatness are found upon percussion, but Baccelli's sign and the coin sound are not obtained.

In neglected cases we may find at some point a red and shiny protuberance where the pus is pointing through the chest wall. The usual place for this is in the fifth space anteriorly, but it may be in the third, fourth, or fifth, in the axilla, or near the angle of the scapula. At times there is more than one such point, or the pus may have already discharged, leaving a fistula.

The disease is more common in children under twelve than in any other patients, and the pus is often overlooked. As a rule the condition is not necessarily fatal with proper treatment.

In aspirating a case of empyema for diagnosis, we are apt to be deceived in our findings at times. In the first place, when the pus is localized by adhesions and surrounded by thick fibrin, it takes quite a little courage to push the needle far enough in. Secondly, the pus may be too thick to flow regularly; but on blowing out the needle a drop at least of pus will be found, and the next time a needle with a larger bore may be used. Right here I want to emphasize a remark of Dr. Robert Abbe's at a discussion of this matter before the New York Academy of Medicine: "Abandon all thought of promoting the absorption of the pus. Get rid of it, by the quickest means." Yet another source of error is a cavity in the lung, near the pleura, into which the needle may pierce. In this case the microscopic examination of the pus discloses necrotic shreds of lung tissue, Charcot-Leyden crystals, and such organisms as are not found in empyema. Lastly, with a subphrenic abscess, and the needle put in too low down, the two layers of the pleura and the diaphragm may be passed and the pus taken from below.

Of the various kinds of empyema I do not need to speak, but one form is so interesting that I shall mention it, namely, pulsating

empyema. Dr. Light, in the London *Lancet* for 1891, gives three cases, and one of these I shall cite: Male, aged 20, thirteen weeks ill; temperature 100°; respirations 38; pulse 139, and weak, pulsating area over fourth rib, fourth space, and fifth rib near left nipple; pulsation occurs with cardiac systole. Chest opened in anterior axillary line and eighty ounces of pus removed.

This case illustrates in a condensed way the size of the collection and the consequent internal tension, the length of the illness, the comparatively slight fever, that it occurs on the left side and tends to point anteriorly. On palpation of such pulsating local bulgings there is not expansive thrill, as there would be in an aneurism, because the fluid simply carries the beat of the heart, and on removing even a slight amount of the pus the pulsation stops.

Pneumothorax.—Air alone is seldom found in the pleura; commonly it is associated with either serum or pus. The condition is observed on the left side more than on the right, and in males in the proportion of 2 to 1.

Symptoms.—The onset of the lesion is seldom gradual. Usually it is very sudden. This is determined by the immediate cause. As a rule there is sudden extreme pain and dyspnea, blueness of the face and lips, with rapid and weak pulse.

The minute one pleura is opened the lung on that side collapses, and in addition the mediastinum bulges toward the other side, and the elasticity of the other lung is lessened. Assuming that the total elasticity of both lungs equals 100, the elasticity of the lung affected may be suddenly reduced to zero, and that of the other to 25, which means a reduction of the total breathing space to only one-quarter of the normal. Now, the average vital capacity for the male is 230 to 240 cubic inches, or 3.5 cubic inches for each inch of height; and for the female the figures are 145 to 150 cubic inches, or 2.3 cubic inches for each cubic inch of height. Hence, with pneumothorax the more spacious male lung would receive only about 60 cubic inches with each breath, and the female about 35 cubic inches. The difference per minute is striking: Instead of, male, 230 x 20, or 4600 cubic inches, he gets only 1000 per minute. Instead of, female, 140 x 20, or 2800 cubic inches, she gets only 700 per minute.

It is no wonder, then, that dyspnea from air hunger and growing accumulation of CO_2 in the blood, with disturbed activity of the heart from these and the mechanical conditions, should render the patient's condition critical. Also it is clear that pneumothorax is worse when the two pleuræ are healthy, with no fibrous bands to lessen the collapse of the lungs, especially when suddenly developed.

Quite commonly the entrance of the air is easier than its exit, and hence the pressure rises steadily in the pleura, until it reaches

that of the external air, or even a little higher, and then no more air enters. But before this can occur the compression of one lung and the collapse of the mediastinum must have reached their extreme, and remain so.

Physical Signs.—The chest is in a condition of fullest expansion on the affected side, and motionless. Over this the percussion is drum-like, or sometimes has a metallic clang if the chest walls are not too rigid; the note is usually higher-pitched and longer in duration than that of ordinary dulness. The vocal fremitus is lost. Wintrich's sign is often observed. This means that the percussion note becomes louder and higher when the patient opens the mouth, protrudes the tongue and breathes quietly. The explanation is that the percussion transmits vibrations to the column of air in the great bronchi and trachea, and the open pharynx reënforces the sound. In other words, it is just the difference between an open and a stopped pipe in the organ, the closed one giving the deeper note. With both fluid and air in the pleura, Biermer's sign is noted. This for the whole pleura is practically the same as Gerhardt's for a tuberculous cavity. The essence of it is that with a change in the position of the patient, like the recumbent after the upright, the percussion note changes its quality markedly, because the rearrangement of the fluid and the air so alters the shape of the resounding cavity that of necessity the note must change upon percussing it.

The line between the upper limit of the fluid or air and the compressed lung is abrupt, and is best determined by crooked-finger percussion. The voice sounds over the lung are ringing or amphoric. The heart, liver, and spleen may be much displaced, and on the left side the cardiac dulness may disappear and the high note of the stomach blend with that of the pleural air. With perforation of the lung we may hear a series of metallic tinklings after deep inspiration or coughing. The sound has been compared to drops of water falling into a cistern, and proceeds from a similar mechanism. They are drops of bronchial secretion, or of fluid in a tuberculous cavity, dislodged by the air pressure from above.

A similar but larger sound is produced by shaking the patient, when the movement and splashing of the fluid may be heard. This sign is called succussion, and is best omitted, unless the patient is strong.

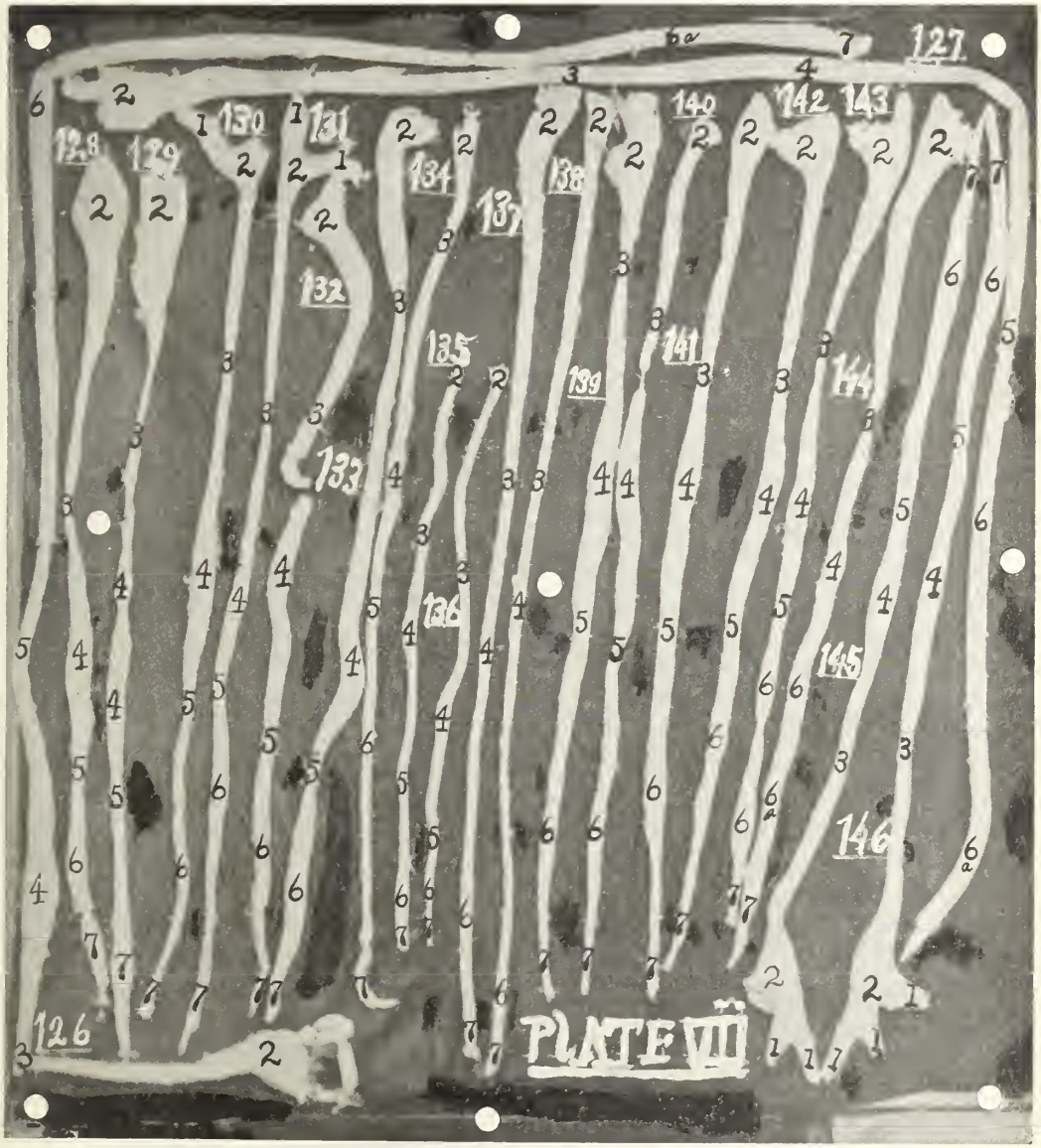
New Growths in the Pleura.—The diagnosis is not often made during life, although slight fever, local pain, and cachexia should draw our attention to the possibility. The signs are those of localized dulness, with weak voice and breath sounds, and evidences of fluid. This fluid may be clear or bloody, and on microscopical examination often presents many cells, which are undergoing division.

BYRON ROBINSON'S THREE URETERAL ISTHMUSES.

BY T. B. WOOD, M D., CHICAGO.

In this note I wish to call the attention of the medical profession to the extensive original work done on the ureters by Dr. Byron Robinson during the past ten years. Dr. Robinson began investigation to determine the form of the ureter in man and animals, dissect-

This plate represents 16 paraffin-filled ureters half life size. The constant ureteral isthmuses are 3, 5, and 7. The calibers of some of the ureteral isthmuses are exceedingly narrow, and a small calculus would lodge at these. The three constant ureteral dilatations are 2, 4, and 6.



Presents 21 half life size paraffin-filled ureters of man and animals. The three ureteral isthmuses are 3, 5, and 7; some of the isthmuses are so narrow that they would allow but a small calculus to pass. The chief isthmus to obstruct the calculus is the proximal one. The three ureteral dilatations are 2, 4, and 6.

ing about three hundred. He injected some 200 with air, fluid, hardening substances as plaster of Paris, paraffin, red lead, and starch, after which photographs and *x*-rays were taken for comparison of form. He has preserved at the Mary Thompson Hospital Laboratory scores of these ureteral specimens injected by paraffin, wax, plaster of Paris, red lead, and starch. Byron Robinson found in general that the ureters of man and the higher apes possessed practically three constant constrictions (isthmuses) and three constant dilatations. He calls the ureteral constrictions the proximal, middle, and distal ureteral isthmuses. The proximal ureteral isthmus is located practically at the distal renal pole (averaging one-twelfth of an inch in diameter). The middle ureteral isthmus is located at the point where the ureter crosses the iliac artery (averaging one-seventh of an inch in diameter). The distal ureteral isthmus is located in the vesical wall (averaging one-tenth of an inch in diameter). Byron Robinson has worked for years on these ureteral isthmuses, laying special stress on their location, because of their practical utility in diagnosis and operations in nephrolithiasis. The ureteral isthmuses will obstruct ureteral calculus and suggest to the physician where the *x*-ray shadow may appear; also by flexion and ureteritis induce obstruction to the flow of urine at the isthmuses.

For the extensive and valuable original investigation on the three ureteral isthmuses I propose that the anatomic eponym of Byron Robinson's ureteral isthmuses be applied to them. I selected two of Robinson's own illustrations to demonstrate the three ureteral isthmuses.

1038 N. California Ave.

A Committee of Agricultural Hygiene has been appointed by M. Ruau, French Minister of Agriculture. The president is Professor Brouardel. MM. Chauveau and Bordas are vice-presidents. Among the members of the committee are Dr. Binot, of the Pasteur Institute; Drs. Chassevent, Thoinot, and Guiart, professeurs-agrégés of the Paris Faculty of Medicine; Dr. Thierry, general sanitary inspector of Paris; Dr. Georges Brouardel, physician to the Paris hospitals; and Professor Vallée, of the Veterinary School, Alfort. It will be the duty of the committee to draw up a scheme of clear, simply expressed rules for the protection of the health of human beings and animals in the country. These rules will be circulated in rural districts under the auspices of the Ministry of Agriculture.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE CHLORIDES AND RENAL DISEASE.

The hydrogenous action of chloride of sodium retained in certain nephritics has been demonstrated with frequency, and it has been shown that in certain cases of nephritis it is only necessary to withdraw chlorides from the dietary in order to effect the dehydration of edematous tissues. The simplicity of the remedy corresponds to the simplicity of the cause.

It is deemed true by many that the part played by chlorides in renal disease is most important. The hydrating action is a property of the chloride of sodium retained by nephritics. Urea, that other substance of which the accumulation in the organism is frequent with nephritics, will not of itself by its retention hydrate the tissues. Its molecules accumulate in the blood and incessantly strive to force the renal barriers. The retained chlorine molecules follow an inverse course, by which they are brought by the blood to the tissues, so that while the retention of the chlorides determines a uremia due to hydremic plethora, the azotate retention causes a dry uremia. Widal, who has done much of the research work in this field, asserts that the occurrence of a dropsy may be detected by weighing the patient daily before there is enough to be detected by the vision. He also suggests the determination of the chloride excretion as a means of ascertaining the degree of renal impairment.

It would seem a simple matter to reform a nephritic's dietary, if the excess of chlorides be the potent influence in determining the hydremic plethora which constitutes dropsy. This would simply be to withdraw the chlorides. A reasonable skepticism might lead one to doubt the results promised by Widal to those who pursue this theory to its ultimate conclusions. There is, however, no reason to

believe otherwise than that the demonstration of the hydrating action of the chlorides must lead to important modifications in the treatment and dieting of renal disease.

EDITORIAL NOTES.

Experiments with Rat Fleas and Plague.

When it was proven that rats carried the plague from place to place vigorous war was inaugurated against them. It has now been proven from a series of experiments conducted recently in Bombay that rat fleas carry plague not only from rat to rat but from rat to man. Amongst other experiments, a room was selected in which a rat that had died from plague had been found. In this room animals were placed, some being protected by fine metallic gauze, etc., around their cages, in order to keep away the fleas, and others were left without these protections. The unprotected animals sickened and died, and rat fleas infected with plague were found on them. The protected animals escaped. In another experiment, houses were selected in which cases of plague had occurred and in which rats dead from plague had also been found. The people were removed, and then in each house captive animals were placed, some being protected as before described and others not. The result was that those animals which were protected from fleas remained sound, while the others were attacked with plague and died. If rats are the carriers of plague they doubtless carry the infections of other diseases, and while we in this part of the world appear to be able to escape the plague, we ought to war against rats to prevent them from disseminating other infections.

The Importance of Infant Feeding.

With the oncoming of the warm season will come the intestinal disorders of infants, which are the cause of such a high mortality-rate amongst the young. The breast-fed baby as a rule finds adequate sustenance, but to the infant who has to rely on artificial feeding life is a struggle from the start. Unfortunately, practitioners neglect to give this very important problem the study it deserves, and so when the anxious mother seeks advice she is too often told to try one or the other of the various advertised proprietary foods, and to follow the directions on the label. The management of the baby's food is no simple matter, and each case must be carefully studied, and often it is only after long and arduous study that the

proper adjustment of fats, proteids, and carbohydrates can be found. It is vastly more difficult to prescribe food for an infant than it is to prescribe drugs. Of the few gratifications that come to the physician, none is greater than that of developing a poor, emaciated infant into a fat and happy baby merely by the proper management of its food supply.

Labor Induced by Hypnotism.

One of the greatest drawbacks to obstetrical work is the amount of time wasted by the practitioner in charge, who can never accurately tell the exact time at which a given confinement will commence. At a recent meeting of the Paris Society of Psychology, a member read some interesting observations on the induction of labor by hypnotism. In a number of cases under his care he found it possible, by hypnotizing the woman, to insure the commencement of labor on a certain date. He found that this could be done provided that the day was not earlier than eight days before that which had been determined by calculation and examination of the patient as the expected day of the confinement. He also said in his communication that even if the physician could not be sure of determining the onset of labor on a definite date, yet he could assume that it should commence on a given night, so that the period of dilatation and expulsion would take place the following day. Such a power as this would be of great advantage to obstetricians. More evidence, however, is needed before this method can be given much credence.

An Insanitary Procedure.

The custom of using the ordinary clothes-brush indoors is one that is no doubt responsible in many cases for the dissemination of disease. Dust, as is well known, is usually loaded with microorganisms and often contains many pathogenic entities. The clothes-brush used indoors never fails to raise more or less dust, and in every household when its use becomes necessary the user should go either into some room apart from the general living rooms, or better still seek the outside air. Dust having been found pathogenic, the scattering of it broadcast in closed rooms by means of the clothes-brush is certainly a gross violation of the very rudiments of hygiene. If it were possible to obtain some sort of a vacuum brush for the purpose of brushing clothes, such a method would be sanitarily ideal, and many an infection that is dust-borne would be avoided.

The Medical Profession and the San Francisco Disaster.

Now that the first effects of the frightful disaster that was visited on San Francisco by earthquake and fire have passed, and the inhabitants have taken stock of what is left them, it will be seen that no class suffered as much as the physicians. Not only have the physicians lost their offices, books, and instruments, but many who previous to the catastrophe were in the enjoyment of lucrative practices now find themselves without a following. The building up of a practice means long years of careful nursing of many interests, and such an upheaval as that which occurred in San Francisco breaks down in a day the results of years of patient effort. To the everlasting credit of the American medical profession, their response to the call for aid for the stricken physicians of San Francisco was prompt and generous.

The Edibility of Animal Spleens.

A very interesting paper under this heading, by Dr. Williams, appeared some time ago in an eastern contemporary. The writer discusses the reasons why these organs are never eaten. He had observed that butchers' dogs ate them greedily, and it occurred to him that perhaps it was only prejudice that prevented their consumption as human food. He broiled one, and found that it resembled liver, but had a more agreeable flavor. They must be eaten quite fresh, as they decompose rapidly and cannot be kept over night even on ice. Dr. Williams calculates that over 50,000,000 pounds of spleens are thrown away every year in this country. It seems too bad that so much good meat should be wasted, especially as the spleen contains all the elements necessary for a healthy food, notably iron and phosphorus.

ITEMS AND NOTES.

In the city of Lima plague has gained ground lately.

The Philippine Medical School is soon to be opened at Manila.

A severe epidemic of meningitis is reported from Franklin, Va., a town of 2000 inhabitants.

Dr. Austin Flint, professor of physiology in Cornell University Medical College, has tendered his resignation.

India is suffering severely from plague, which during the past month has increased rapidly in nearly every province.

The Italian Red Cross Society has now a membership of 24,000. It has a capital fund of $900,000, and material valued at $400,000.

The American Association of Physio-Medical Physicians and Surgeons held its annual convention in Chicago, May 22 to 24, at the Sherman House.

The National Association of United States Pension Examining Surgeons held its annual meeting at Boston on Monday and Tuesday, June 4 and 5, 1906.

At the unveiling of the memorial bust of the late Dr. Alexander J. C. Skene in Brooklyn on May 5, an address on Skene's life was delivered by Dr. A. Jacoby.

Dr. Jokichi Takamine has been decorated by the Mikado with the Fifth Order of the Rising Sun in consideration of his researches and discoveries in applied chemistry.

The Reichstag on May 7 adopted a new tax of $200 per metric hundredweight on fine-cut and cigarette tobacco. It also imposed a duty of $1.25 per 1000 on cigarettes.

Cable despatches report that Dr. Ishigami, a Japanese bacteriologist, has succeeded in obtaining an antitoxin for tuberculosis which gives good results in early cases.

Plans have been prepared for a six-story fire-proof building which it is expected the Philadelphia Medico-Chirurgical College will erect at 129 to 139 North Eighteenth Street.

Dr. Henry Pickering Bowditch, of the George Higginson professorship of physiology in the Harvard Medical School, who has been in the faculty of that institution for thirty-five years, has handed in his resignation, to take effect at the close of the present academic year.

Professor Adamkiewicz, the inventor of the cancer "cure" termed "cancroin," has published a pamphlet under the fanciful title of "Der Krebs und die 'Goldene Statue,'" in which he complains bitterly of the inappreciation of his critics and the injustice of their attacks upon him.

Statistics of accidents in the Swiss Alps during 1905 show that 172 climbers were killed and a few more injured. The greatest number of victims was among the Swiss themselves. Of the total accidents, 10 per cent were unavoidable. The remainder were due to foolhardiness or inexperience.

According to a recent monthly report of the Board of Health of the Philippine Islands, the number of lepers now living in the archipelago is 3683. They are scattered through the various provinces. Cebu, which has 675, heads the list, but only one province is wholly free from the disease.

Work is to begin immediately on the extermination of mosquitoes in New Jersey. Governor Stokes, on April 26, signed the Brown mosquito bill which passed the Assembly and Senate some weeks ago. The measure provides for the appropriation of $350,000, or $50,000 annually for seven years, to be used in fighting the insects.

Recently the 115th annual meeting of the City of London Lying-in Hospital was held. In a review of the work done by this institution it was pointed out that since its establishment 65,000 children have been born under its roof, while during the past thirty years no less than 45,596 mothers had been attended in their own homes by hospital authorities.

The Practitioners' Society of Rochester, N. Y., composed of women physicians, has changed its name to Blackwell Medical Society. The following are the officers of the new society: Honorary president, Dr. Sarah R. Adamson Dolley; president, Dr. Marion Craig Potter; vice-president, Dr. Evelyn Baldwin; secretary, Dr. E. A. Cady Harris; treasurer, Dr. Helen De Witt Justin; councillors, Dr. Sarah R. A. Dolley, Dr. Evelyn P. Ballentine, and Dr. M. Louise Hurrell.

THE University of Giessen completes, in 1907, the three-hundredth year of its existence, says a contemporary. The University of Leipsic is arranging a celebration for 1909 of its five-hundredth anniversary. We learn that the University of Leipsic was founded by secession of several thousand students, December 14, 1409, from the flourishing university at Prague.

THE International Congress of Chemistry was opened at Rome on April 26 by King Victor Emanuel and Queen Helena in the presence of 1800 members. The American delegates are H. W. Wiley, chief of the Bureau of Chemistry of the Department of Agriculture; Prof. Edward Hart, Lafayette College, Doylestown, Pa.; W. D. Horn, Yonkers; C. A. Browne, Louisiana University; C. B. Dudley, Altoona, Pa.; and J. U. Lloyd, Cincinnati.

THE reports from San Francisco state that while most of the private hospitals and some of the down-town institutions of larger size were destroyed by the fire which followed the earthquake many others escaped. The Cooper Medical College and the Lane Hospital connected with it were only slightly damaged and escaped from the fire. The medical department of the University of California and the Children's Hospital were not seriously damaged.

THE code of medical ethics has, says the *Medical Record*, been declared by the Medical Society of the State of New York to be merely a suggestive and advisory guide, and it therefore remains, as during the past quarter of a century, of no binding force in that State. This conclusion was reached by the substantial majority of 3110, there being 3307 affirmative to 197 negative votes. Of the 6352 members of the society to whom the referendum ballots were sent, more than 2800 refrained from voting.

THE Health Department of the City of Chicago estimates that the establishment of the superior drainage system by means of the celebrated drainage channel flowing into the Mississippi River current, and which has been in operation for the past six years, has saved in the time mentioned upwards of 5000 lives in the municipality. The statement is based upon the mortality from impure water diseases for a period of four years preceding the opening of the drainage canal, and for the six years since that event.

THE annual clinic of the Detroit College of Medicine was opened in Detroit on Monday, May 7, and continued until Thursday, May 17. There were present about three hundred of the alumni of the college. Among the visiting physicians who held clinics at

some time during the ten days of the clinic were: Dr. Frank Billings, dean of the Rush Medical College of Chicago; Dr. James P. Tuttle, professor of rectal surgery at the New York Polyclinic Medical School; Dr. George Dock, professor of medicine at the University of Michigan; Dr. Bart E. McKenzie, of Toronto, president of the American Orthopedic Association; and Dr. Howard A. Kelly, professor of gynecology at Johns Hopkins University.

THE Berlin First-aid Association, which was founded some time ago by the union of three previously existing societies of corresponding purpose, is stated to be in a very flourishing condition, and to have a surplus in hand. It has some eighteen stations in Berlin, at each of which a medical man and a nurse are in constant attendance. Emergency calls whencesoever received—private houses, hotels, theaters, and the streets—are answered, but first aid is alone given, while fees are charged to persons who are able to pay them, either themselves or through the agency of any benefit society to which they may belong. If the persons in need are very poor they are attended gratuitously, or application is made to the municipality for payment.

ACCORDING to the statistics published by the German Imperial Statistical Office, the number of suicides has slightly decreased, being 12,468 in 1904 as compared with 12,730 in 1903. The proportion of suicides per 100,000 of the population was 21.0 in 1904, 21.7 in 1903, 21.4 in 1902, and 20.8 in 1901. Arranged according to sex, in 1904 there were 9704, and in 1903 there were 10,017, suicides among males; while in 1904 there were 2764, and in 1903 there were 2713, suicides among females; so that the decrease occurred only among the males. With regard to the local distribution of suicides the report states that the lowest number was reached in the Prussian provinces of Posen, Hohenzollern, and Westphalia, being 9.9, 10.3, and 11.0 per 100,000 respectively. The highest numbers were registered in Saxe-Coburg and Saxe-Altenburg, being 41.8 and 41.5 per 100,000 respectively. In Hamburg 37.8 and in Berlin 31.0 suicides per 100,000 were registered.

STATISTICS published by the *Frankfurter Zeitung* as to the number and distribution of medical students throughout the German universities show in a general way that the popularity of medical studies increased progressively from 1860 to 1890, since which year it has declined. During the winter session 1905-1906 the total number of medical students in Germany was 6080; last summer it was 6032; during the previous year 6153. In 1885 the total was

7725; in 1890, 8986; and in 1896, 7851. These figures include foreign students, of which there are at present 895 registered in the universities; last summer there were 751. German subjects registered as medical students numbered in 1861, 2000; in 1872, 3365; and in 1881, 4389. The proportion per 100,000 inhabitants shown by medical students of German nationality at the present date is 8.5; in 1890 it was 14, in 1881 it was 9.7, in 1872 it was 8.5, and in 1861 it was 5.6. The popularity of medical studies in the different universities is shown as follows: Since 1862 the number of medical students at Berlin, Munich, Freiburg, Heidelberg, Jena, Kiel, Giessen, and Rostock has increased 50 per cent, and at Erlangen over 25 per cent. At Greifswald it has decreased 100 per cent, at Breslau about 50 per cent, at Leipsic and Würzburg more than 25 per cent, and at Königsberg and Halle more than 20 per cent. Munster alone of German universities has no medical faculty.

A NEW journal with international aspirations, the *Journal of Abnormal Psychology*, has been started in Boston. It will be published bimonthly, and the editorial management will be under the direction of Dr. Morton Prince, professor of nervous diseases, Tufts College Medical School, with whom are coöperating, among others, Dr. Hugo Münsterberg, professor of psychology, Harvard University; Dr. Charles L. Dana, professor of nervous diseases, Cornell University Medical School, New York; Dr. James J. Putnam, professor of nervous diseases, Harvard Medical School, Boston; Dr. August Hoch, Bloomingdale Asylum, New York; and Dr. Adolf Meyer, director of the Pathological Institute, New York State hospitals. The journal is meant to serve the interests of both medical science and psychology, and is primarily intended for the publication of articles embodying clinical and laboratory researches in abnormal and mental phenomena. The field of investigation includes, for instance, such subjects as hysteria, hallucinations, delusions, amnesias, aboulias, aphasias, fixed ideas, obsessions, automatisms, alterations of personality, multiple personality, dissociation of consciousness, subconscious phenomena, relation of the mind to physiological processes, and neurasthenic and psychasthenic states. In discharge of its international functions the journal will contain articles printed in French or German, if expressly requested by the author.

NEW PUBLICATIONS.

THE INTERNATIONAL MEDICAL ANNUAL.

The publication of the twenty-fourth issue of the Medical Annual has been somewhat delayed through the destruction of its offices by fire, but it now appears in as complete a form as ever. The Annual is still one of our best reference books regarding all that is new in medical treatment and progressive in medical science.

The International Medical Annual. The Year-book of Treatment and Practitioners' Index. Twenty-fourth year. Price $3.00. E. B. Treat & Co, New York.

DEMONSTRATIONS OF ANATOMY.

A manual for the medical student is presented in Ellis's Demonstrations, of which the twelfth edition is now issued. The book has been rearranged in accordance with new conditions and recent advances in knowledge. The work is copiously illustrated, and is an admirable guide for the student following the usual course of dissection.

Ellis's Demonstrations of Anatomy. Being a Guide to the Knowlege of the Human Body by Dissection. Twelfth Edition. Revised and edited by Christopher Addison, M.D., B.S., Lecturer on Anatomy, Charing Cross Hospital. Illustrated by 306 engravings on wood and in color. Wm. Wood & Co., New York.

DYNAMICS OF LIVING MATTER.

This book contains a series of lectures given by Professor Loeb, professor of physiology in the University of California. The aim of the lectures is to give presentation of his researches on the dynamics of living matter and the views which he held concerning them. The book gives us a somewhat complete survey of the field of experimental biology, and the reader who is not thoroughly familiar with this subject will find much in it which is new to him, and much of general interest.

Dynamics of Living Matter. By Jacques Loeb. Columbia University Press, New York, Macmillan Company Agency.

AUTOTOXICOSES.

This little book furnishes us with a very complete review of autochthonous intoxication as a factor in the aggravation or production of disease. The book reviews the subject from very many standpoints, and will be found an exceedingly useful book of reference.

The Autotoxicoses: Their Theory, Pathology, and Treatment. By Heinrich Stern, Ph.M., M D., New York, Professor of Special Medical Pathology and Therapy in the College of Physicians and Surgeons, Boston, etc. 12mo; 222 pages. Price $1.00. Chicago: G. P. Engelhard & Co., 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Chronic Urethritis and its Treatment.

At the recent meeting of the Fifteenth International Congress of Medicine, Dr. B. Guisy (*Lancet*, April 28, 1906) read a paper under this title. He said that under the term chronic urethritis is included every chronic, painless inflammation of the mucous membrane of the urethra of gonococcal origin, even though no gonococci may be present. There are three main varieties: (1) those in which gonococci are still present; (2) those which are microbic, but in which gonococci are absent; and (3) those in which no organisms are to be found. The spread of a gonococcal urethritis from the anterior to the posterior urethra and to the deeper structures is due partly to the active movements of the gonococci and partly to the movement of the leucocytes which have swallowed them. Within a few hours of infection of the urethra gonococci can be found in the submucous tissue and around the glands of the urethra. The reasons for a urethritis becoming chronic are (1) the presence of some constitutional condition, such as general weakness or rheumatism, and (2) certain special anatomical conditions in the urethra, such as a stricture or an abscess. Dr. Guisy thinks that stricture of itself has very little to do with the production of a chronic urethritis. The most important cause is the gonococcal infection of the glands of Littre and the crypts of Morgagni, from which repeated reinfection of the urethra may proceed.

The treatment of chronic gonococcal urethritis consists, in the first place, in its prevention by the abortive treatment of acute gonorrhea with extensive lavage of the urethra with various antiseptic solutions. In a chronic urethritis, if examination shows gonococci still to be present, the same treatment should be adopted as if the inflammation were acute, any vegetations, abscesses, or other gross lesions having been previously removed. Cocainization or the very weak solutions of permanganate of potassium and of perchloride of mercury are the most useful. When success does not follow, some lesions, such as a granulation or polypus, must be sought for and removed. In cases of chronic urethritis in which some organism other than the gonococcus is present similar treatment should be adopted, and even when no microbe is present

lavage should be used. In all cases the only internal treatment should be the administration of urotropin and arheol after the local treatment has ceased.

Gonorrhea in Women.

Palmer Findley (*American Medicine*, March 17, 1906) says anatomic recognition of gonorrhea of the urogenital tract may be impossible, particularly in cases of long standing. For this reason the diagnosis must occasionally rest upon the finding of an inflammatory lesion in one or more portions of the tract, and associating these lesions with a history of exposure to gonorrheal infection. A diagnosis that admits of no doubt can only be based upon the finding of the gonococcus in the secretions or tissues. This is by no means easy in the chronic stages when there is little or no secretion, and the organism, which at best is recognized with difficulty in the tissues, is found in small numbers or may be wholly wanting. The small size of the gonococci and their scarcity in the tissues of chronic cases may necessitate the microscopic examination of a large number of sections. This involves rare skill in technique, not only in the preparation of the sections, but in the differentiation of the gonococcus from other cellular structures. Grave mistakes have been made in diagnosis by assuming that no infection exists because the usual complaints of an acute infection do not appear in the history.

Since the cure of gonorrhea is so unsatisfactory, and when deeply seated is usually only accomplished by a mutilating operation which too often unsexes the woman, prophylaxis becomes the paramount issue in the management of gonorrhea of women. Unfortunately, it is not alone the laity which is in need of education in this respect; the profession is often guilty of being too hasty in pronouncing a cure and in giving sanction to marriage and to the resumption of the marital relation. Untimely interference with uterine and urethral applications in the early stage of the disease too often causes an extension of the infection and makes a serious lesion of what might otherwise have been a self-limiting disease.

Primary Tumors of the Urinary Bladder.

L. Davis (*Annals of Surgery*, April, 1906) says that stone in the bladder is not an etiologic factor of importance in the causation of these tumors. The condition of the underlying bladder wall in regard to epithelial infiltration is the most satisfactory and reliable guide in the determination of the benign or malignant character of

papillary epithelial tumors of the bladder. If the foregoing condition is accepted as the differential test of these growths, then will the benign forms commonly called papillomata be found to at least equal if not outnumber the malignant, the papillary carcinomata. Recurrent epithelial tumors are not necessarily malignant. Papillary tumors of the bladder, proved to be histologically benign, may rapidly lead to a fatal result if left alone. Surgical intervention at the proper time in the case of pedunculated papillary tumors of the bladder offers a very fair chance of long immunity, if not of permanent cure. The method of surgical intervention to be preferred in these cases is excision of the tumor *in toto*, with a margin of bladder wall at its base, including mucosa, submucosa, and muscularis in part; the section need not penetrate the entire thickness of the wall. In this way a beginning epithelial infiltration of the base, if present, may be circumvented; or if it is not present, the knowledge of the fact is of general value in the important matters of diagnosis and prognosis. The defect in the bladder wall should be closed with sutures, which will at the same time control hemorrhage. The gravity of the operation is not appreciably increased by this procedure.

First-aid Dressings.

W. von Oettingen (*Centralblatt für Chirurgie*, No. 13) in his service with the Red Cross relief corps in Manchuria made extensive use of a varnish as a dressing for wounds. The wound was never washed, shaved, or disinfected, but the varnish was painted around it with a brush; a pad of cotton was then applied to the wound, the varnish causing it to firmly adhere around the edges. The results were beyond his expectations. The varnish consists of mastic 20 parts, chloroform 50 parts, and 20 drops of linseed oil. This is applied with a brush which is fixed in the stopper of the container; the cotton pads are wrapped in parchment paper and sterilized. This varnish causes a firm and lasting adhesion to the skin.

Metabolism in Cancer.

After summarizing the previous work in this line, H. H. Glosser and W. Strisbie (*Journal of the American Medical Association*, Feb. 24, 1906) report the results of their own studies to determine the relations of the nitrogen loss, if any, with the gain and loss of weight of cancer patients, as compared with normal individuals; to determine the possible retention of chlorides in the system, and its extent; to

determine whether or not such retained chloride has any direct relationship with the supposed increase of chloride in the blood and with the edematous deposits; and to note the effect of adding or excluding chloride from the diet in cancer patients as compared with normal individuals. They found that in a normal individual proteid starvation was followed by a loss of nitrogen, while the chloride equilibrium was maintained. In cancer patients the nitrogen loss showed considerable variations, explainable to some extent by other factors than the existence of the tumor. On the other hand, while a healthy person could assimilate enormous quantities of chloride and strike a balance in from twenty-four to forty-eight hours, cancer patients showed edema when chloride consumption was increased, the kidneys being unable to excrete the excess. The work shows the existence to some extent of toxic substances (not perhaps specific cancer poisons) in the system capable of interfering more or less with nutrition. They may be suboxidized nitrogenous products.

Leukemic Hemorrhage Ending Fatally.

Bostetter (*Centralblatt für Gynäkologie*, 1906) reports the case of a primipara who in the seventh month of pregnancy entered his clinic for hemorrhage. The urine contained blood, and there was dulness over both sides of the chest. The patient died suddenly with symptoms of internal hemorrhage. The post-mortem revealed a leukemia, and there was also present a double suppurative tonsillitis. The writer suggests that the tonsillitis may have been the beginning of a sepsis which induced a hemorrhage, although the leukemia and the presence of large quantities of blood in both pleural cavities would be a sufficient cause of death.

Diagnosis of Flatfoot.

Schumann (*Münchener med. Wochen.*, No. 2, 1906) finds that frequently flatfoot cannot be diagnosed until the foot is put on the ground and the weight of the body superimposed. In order to record the deformity a piece of writing-paper is dipped in liquor ferri diluted one-half, the sole of the foot is painted with a 5-per-cent solution of potassium ferrocyanide, and the patient allowed to stand on the prepared paper. The result is a blue imprint of the plantar surface of the foot on a yellow background.

MEDICINE.

A Plea for More Conservative Examination in Suspected Cases of Pulmonary Tuberculosis.

Claude C. Keeler (*Medical Record*, April 7, 1906) calls attention to the following symptoms as being suspicious of incipient tuberculosis: Attacks of acute indigestion, chronic bronchitis — with or without expectoration — anorexia, dyspnea, slight or no rise in temperature, tachycardia, and little or no loss of flesh. A very careful examination of such a case should be made, even though only a few of the above symptoms may be given. Although not every patient with these symptoms is afflicted with tuberculosis, it is usually in such patients that the earliest signs aud symptoms are overlooked by the attending physician. Several examinations should be made on different days and at different hours of the day. In most cases there will be found local retraction of the chest wall. Considerable time should be devoted to palpation, percussion, and auscultation. Dulness is detected at the apices of the lungs in the very earliest stages of tuberculosis. Auscultation is by far the most satisfactory method in the diagnosis of incipient tuberculosis. Râles are never heard in the normal chest. Crepitant râles are most often heard in incipient tuberculosis. The writer believes that the mortality of this disease may be reduced to a very low percentage if the physician will spend sufficient time in the examination of suspected cases. If there should be left a doubt in his mind after the examination, the patient should be seen by one who is an expert in the detection of the earliest manifestations of this disease.

Cleansing of Milk Vessels.

A. H. Stewart (*American Medicine*, Feb. 17, 1906) in his efforts to obtain clean milk for Philadelphia has made a thorough investigation of the prevailing methods for cleansing milk vessels. He found that many dealers entirely neglect this important procedure, while a majority of those who have a regard for cleanliness employ methods which fail to accomplish the desired result. He cites the best results obtained from an examination of milk vessels in a number of establishments, and commends a method used by a small percentage of dealers. It consists of washing the bottles and cans by a powerful stream of some hot washing powder solution with rapid solvent power pumped into the bottles, which are then rinsed with boiling water. This method cleanses 95 per cent of the bottles perfectly.

Tables showing the results obtained from an investigation into the comparative values of washing powders as regards the destruction of germs, rapidity and thoroughness of action, and expense entailed by their use are given. Sodium carbonate would seem best for cleansing purposes, for besides meeting all the requirements it has the advantage of being cheapest in price.

Dr. Stewart asserts that the filling of dirty milk bottles on the streets by the men who deliver milk in wagons and the return of cans to the farm without any washing whatever are matters which should receive prompt attention. He makes a strong plea for the establishment, under supervision of the Bureau of Health, of can washing and cleansing buildings where all cans may be sterilized before they are sent to the farms. The advantages of such a scheme would be: (1) Saving of milk which is now destroyed by rapid fermentation due to infection from dirty cans. (2) Saving of ice used to preserve milk which is eventually lost. (3) Saving of time. (4) Abolition of the use of preservatives. (5) Saving of space for the storage of empty cans. (6) Increased sale of milk due to restored confidence in its purity. (7) Saving of the lives of thousands of children who are now fed on fermenting milk, the food value of which has been lost. (8) Prevention of epidemics of dysentery and other milk-borne diseases.

The Neurons.

L. F. Barker (*Journal of the American Medical Association*, April 7, 1906) reviews the history of the neuron doctrine and the actual state of our knowledge of the subject at the present day. He comes to the conclusion that "none of the theories opposing neuron conception has led to the objective demonstration of the existence of a real continuity among the nerve elements," and that there is a marked difference between so-called neuronists and antineuronists in the interpretation of the known facts. The former admit only what is demonstrable, and not finding intracellular anastomoses they do not feel called on to admit that they exist. The latter, while equally unable to demonstrate their existence, hold that they ought to exist, that continuity is *a priori* so probable that those who deny it should be compelled to prove to their satisfaction that it is impossible. He suggests that the multiplication of hypotheses may have been largely due to the assumption that the neurofibrils represent the sole conducting element in the nervous system, a point by no means yet satisfactorily proved.

The questions of the possibility of nerve conduction apart from

the cell body and of the autoregeneration of nerve are noticed, and the known facts discussed. Barker does not venture a positive opinion on either of these points, but does not deny their possibility. The disputed question as to the unicellular or pluricellular origin of the neuron and its peripheral nerve fibers is taken up, and the remarkable investigations of Dr. Ross Granville Harrison, demonstrating that motor nerve fibers develop as processes of the anterior horns instead of being developed from the neurilemma cells along their course, are being mentioned as among the most important of the recent contributions to our knowledge of the subject. But even if the pluricellular origin of the neuron could be demonstrated, it would still be an anatomic unit, but as an organ rather than a single cell. The article is very fully illustrated.

Albuminuria.

A. Balocco (*British Medical Journal*, April 14, 1906) has studied albuminuria by the method of fractional precipitation. His results do not on the whole confirm those obtained by other workers as regards the prognostic indications to be drawn from the presence of various types of albumin. The author carefully estimated the amount of serum albumin, of englobulin, and of pseudoglobulin in various forms of albuminuria, by means of fractional precipitation with sulphate of ammonia, and subsequent determination of nitrogen by Kjeldahl's method. Englobulin was never found in febrile albuminuria. The globulinic index cannot be accepted as a guide in the discrimination of various kinds of albuminuria, as it varies in such wide limits in cases which are closely akin to each other. No reliance can be placed on the albuminoid index as a prognostic criterion, for although sometimes it was higher in cases in which the kidneys were comparatively free from disease, the reverse was the case at other times. The author does not mind a marked increase in globulin in acute nephritis, febrile albuminuria, orthostatic albuminuria, and the albuminuria of pregnancy.

Paroxysmal Tachycardia.

A. W. Hewlett (*Journal of the American Medical Association*, March 31, 1906) remarks that while no adequate physiologic explanation has yet been made of the remarkable affection known as paroxysmal tachycardia, some light has been thrown on it by recent observations. It has been shown that in a number of patients, at least, there is an abrupt doubling of the heart-rate at the beginning

of the attack, and that the return to the original rate is sometimes equally abrupt. He reports the case of a patient in whom the heart-rate was doubled by change from a recumbent to a sitting position. The only satisfactory explanation of the abrupt change of rate is that offered by Hoffmann, that the heart does not contract to every stimulus it receives. Of the several explanations suggested for this, such as exhaustion of irritability or of muscular contractibility, blocking of the impulse every other time high up in the auricle, the last named seems to Hewlett to have some support in the fact that it also satisfactorily explains the secondary fourfolding of the rate observed by Hoffmann. In such case the impulse may be blocked at two points, one below the other. The case is not reported as one of typical paroxysmal tachycardia, but as of interest in the bearings on the condition, which may be only a symptom of various cardiac conditions.

Prognosis in Typhoid Fever.

L. Carl (*British Medical Journal*, Feb. 4, 1906) discusses the prognosis of typhoid in relation to certain special factors, namely, the rate of the pulse, the agglutinative power of the serum, and the blood-pressure. He finds a slow pulse and a high agglutinative power existing contemporaneously are of favorable import, whilst the reverse of this (a quick pulse and low agglutinative power) is serious. The two factors to have any significance must exist together. A quick pulse with high agglutinative power may coincide with or indicate a bad attack. The two factors are independent. The blood-pressure is as a rule only slightly elevated. In man it seems probable that the cardiac inhibitory centers are specially sensitive to the typhoid toxins, hence the slow pulse and the occasional presence of bradycardia in favorable cases of typhoid. In severe cases the normal sensitiveness of the vagus is more or less lost, hence the quickened pulse, cardiac failure, and lowered blood-pressure.

Chorea and Some Disorders Simulating It.

Augustus A. Eshner (*Medical Record*, April 7, 1906) speaks of chorea as being a disease of childhood and adolescence. It occurs more frequently in females than in males, in the proportion of two to one. No class of society is exempt, although this disease is more common in the city than in the country. It is rare in negroes and Indians. In the spring of the year the largest number of attacks occur. It may be inferred that the symptoms of this disorder are

due to the disturbance of motor cells of the cerebral cortex, of bacterial or toxic origin. Treatment by arsenic is indicated, and under this régime when there are no complications the ordinary duration of an attack of chorea is from six to ten weeks. Recovery nearly always takes place. In an occasional case, however, death occurs. Besides arsenic, some form of iron may be useful. As a rule the diagnosis of chorea is easy. The writer believes that chorea, as here described, should be differentiated from so-called habit-chorea, postparalytic chorea, the various forms of hysterical chorea, and chronic progressive or senile chorea. Finally, he mentions the nodding and rotatory movement of the head, associated with nystagmus, which is sometimes observed in rachitic children, and which is sometimes mistaken for chorea.

Lactic Acid in Gastric Carcinoma.

K. Sick (*Deutsche Archiv für klin. Med.*, No. 4, 1906) investigated thirty-four cases of doubtful carcinoma of the stomach. He concludes from his findings in these cases that the Oppler-Boaz bacilli do not flourish in the stomach unless there is more or less of a deficiency of hydrochloric acid. Lack of motor power also favors their growth. The most important factor favoring their growth and the formation of lactic acid is the presence of the soluble albuminoids produced by the autolysis of cancerous growths. The long bacilli are present in the mouths of healthy persons and in patients suffering from hypoacidity, but they do not flourish as in cases of ulcerating cancer.

THERAPEUTICS.

Resection of Cervical Sympathetic for Facial Neuralgia.

D. Delbet (*British Medical Journal*, April 7, 1906) reviews his advocacy of resection of the superior ganglion of the cervical sympathetic nerve in cases of severe and obstinate facial neuralgia, which operation, he holds, should be practiced in preference to any other when medicinal treatment has failed. It is, he believes, the least formidable and probably the most efficacious of all operative methods, and is free from such results as anesthesia, paresis, and the formation of a visible and unsightly scar. This operation, he regrets, has not been favorably received, but he is able to refer to three cases treated by Poirier, in two of which resection of the ganglion was followed by very encouraging results. In the third case this surgeon

was unable to find the superior ganglion, and the results of the operation are reported as having been insignificant.

In discussing the relative advantages of an incision in front of, and one behind, the sternomastoid muscle, Delbet states that the anterior method is in some subjects very direct and very easy, but as in other subjects this method may unexpectedly present serious difficulties he thinks that the posterior method should be always adopted. The operation, it is evident, will not always be found an easy one, as not only, as in Poirier's experience, may it be impossible to distinguish the superior ganglion, but there is also a risk of failure to distinguish the sympathetic cord from the vagus.

Treatment of Malignant Disease by X-rays.

J. C. Rankin (*Archives of the Roentgen Ray*, April, 1906) reports his successes in treating various cases of malignant disease. He has been careful to avoid overdosage, and he thinks that his results may fall short of what may be attained by a more perfect regulation of dosage. (1) Carcinoma. Seventeen cases treated, of which six were recurrences after amputation of the breast for scirrhus. Apart from lessening the pain no results were obtained, and the progress of the disease did not appear to be arrested. (2) Sarcoma. Of twelve cases treated, nine are known to be dead. Though these results are very bad, still there is some promise that *x*-rays have a certain influence. One case of sarcoma of the orbit had treatment immediately after enucleation; there were no signs of recurrence until three months after the operation. (3) Rodent ulcers. Thirty patients came under observation, generally old and inoperable cases. Of these, eighteen are classified as healed or cured; eight have improved and are mostly still attending. Of the rest the report is not so favorable: two disappeared, one was little improved, and upon one patient an operation was performed.

Danger and Protection in X-ray Work.

W. Lehman (*Medical Record*, Feb. 3, 1906) makes some interesting statements in regard to the danger of the Roentgen rays to patient and operator, and gives some ways of protecting both. In 1903 Albers-Schoenberg and Frieden published results of their experiments with animals. Rabbits were kept in an *x*-ray room several yards from the tube, and after some months the observers were surprised to find that the animals had not produced generations, a fact that was due to necrospermia and azoöspermia. Alarming results have come to light with regard to strong young married

men working in an *x*-ray factory, who since handling the *x*-rays have had no children. The writer emphasizes the necessity for shielding the operator not only from the Roentgen rays, but from the secondary rays as well. He says that the best means of protection is a gown of impermeable material. Complete suits have been made of material of different degrees of safety, the heavier and bulkier the better, and sheet-lead is the only safe thing. In a suit of this sort described by the author, the apron of Roentgen-ray-proof reaches from the neck to the knees; the cap covers the face and head, and is provided with lead glasses. The gloves are also ray-proof, but neat enough to permit of handling screen and apparatus. He emphasizes the fact that men who work with *x*-rays more or less constantly should never neglect the possibility of serious results.

Therapy of Frost-bite.

Hecht (*Therap. Monat.*, 1906) recommends that frozen hands and feet be placed in hot water at as high a temperature as possible three times a day and kept there for ten to fifteen minutes, dry the parts, and if no ulceration is present apply alcohol. In the evening massage the affected parts with a salve and cover the same with it. The author uses the following:

Ichthyol	1-5 gramme.
Resorcin	1-3 gramme.
Adeps Lanæ	25 grammes.
Olive oil	10 grammes.
Aq. dest., q. s. ad	50 grammes.

In cases of ulceration silver nitrate or tincture of iodine is indicated to stimulate the granulations.

Treatment of Mediastinal Carcinoma with the Roentgen Rays.

G. E. Pfahler (*American Medicine*, Feb. 10, 1906) reports six cases in which carcinoma of the mediastinum developed secondary to carcinoma of the breast. All of the patients had been previously operated upon. The diagnosis of mediastinal carcinoma was confirmed by consultation and by radiographs. One patient had palsy of the left arm, due to pressure of deep-seated cervical glands upon the cervical plexus. Treatment was directed to these glands as well as the mediastinum, and was followed by what appears to be complete recovery. Three of the six patients have apparently recovered, though they are still under observation. In none were any bad results noted. Fifty per cent of recoveries in an otherwise fatal

disease, for which other forms of treatment offer no hope, justifies us in recommending this form of treatment to patients as early as possible.

The Sanatorium Treatment of Tuberculosis.

Geo. B. Kalb (*American Medicine*, Feb. 24, 1906) says sanatorium treatment gives the best results because the patient is under continuous control, and nothing is left to the feelings or whims of the patient or his family. The total eradication of pulmonary tuberculosis is within the range of the possible, and to make it more probable institutions of three kinds should be established: (1) For incipient cases where practically all can be cured; (2) for advanced cases where a goodly percentage can be cured; (3) for far-advanced cases where some can have their disease arrested and the remainder given euthanasia, and all prevented from infecting others.

Treatment of Nephritis.

Strasser and Blumenkrantz (*Berliner klin. Wochenschrift*, No. 14, 1906) find that baths at a temperature of 34° to 35° C. given for one to one and a half hours' duration increase the diuresis, also the nitrogen and sodium chloride elimination. The albumin is somewhat decreased by this treatment. They attribute this to the increase of the circulatory area and to the quickened circulation. Nephritics subjected to sweating and electric-light baths show no retention of water or sodium chloride. What edema is present must be attributed to an impairment of the walls of the blood-vessels.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Secondary Cataract.

At the Fifteenth International Congress of Medicine, held recently in Lisbon, Prof. M. Manolescu, of Bucharest (*Lancet*, April 28, 1906) read an interesting paper upon this subject in which he dealt fully with the causes of secondary cataract, its different anatomical and pathological features, the operative procedures recommended with their prognosis, and the preventive courses that can be adopted. The causes are most commonly direct irritation, which

prevents the absorption of lenticular fragments remaining after cataract extraction, and indirect irritation or infection from syphilis, tuberculosis, gout and albuminuria, or rheumatism. Operation for secondary cataract Professor Manolescu considers to be invariably a serious one, and one that is followed in the experience of different operators by many complications, such as inflammation more or less grave of the corneal wound, of the iris, choroid and ciliary processes, panophthalmia, sympathetic ophthalmia, and tertiary cataract. He proceeds to summarize briefly the procedures usually adopted by various authorities for avoiding these unfortunate sequelæ, and considers that the preventive methods might be summarized under six heads: (1) The original extraction should be as complete as possible, only ripe cataracts being operated upon; (2) a large fragment of the anterior capsule should be removed; (3) appropriate measures must always be taken against infection, especially of the ciliary region; (4) the posterior capsule must be incised after the complete cessation of all postoperative irritation if the formation of secondary cataract is suspected; (5) where complete removal of all lenticular fragments has been impossible, mydriatics should be used until their disappearance; and (6) all individual diatheses must be appropriately treated.

Eye-strain and Digestive Disorders.

G. M. Gould (*Journal of the American Medical Association*, March 24, 1906) comments on a statement made by Dr. J. H. Musser in the *Journal* (No. 4, 1905) that the cure of so-called bilious attacks, etc., by the correction of errors of refraction is a common and familiar occurrence. He points out that it is sixteen or seventeen years since he himself first began to affirm and to reaffirm this truth, and this is the second convert made among the diagnosticians, leading practitioners, or gastrologists. Notwithstanding the admission that the fact "is familiar to all," Gould reviews the text-books and literature and shows how little mention it has received, and how generally it has been ignored by the authorities. He claims that he began and for ten years was alone in advocating the ocular origin of these diseases, and objects that after being ignored so long it should now be accepted without due credit to its earliest advocate, as simply a truth "familiar to all." While the admission, he says, is a breach in what have seemed the impenetrable walls raised by the authorities and text-book-making classes, he doubts its sincerity and calls for honest reports of cases from those who must observe them, and a general scientific utilization of the truth in practice.

GYNECOLOGY AND OBSTETRICS.

Ovarian Dermoid Cyst; Suppuration and Discharge into the Bladder.

B. Barnsby (*British Gynecological Journal*, February, 1906) reports the case of a woman, aged thirty-eight, in whom when pregnant several years previously a cyst of the ovary had been detected, torsion of the pedicle occurred, and the cyst suddenly increased in size with severe peritoneal symptoms. Nevertheless the patient would not consent to an operation, and eight weeks later Barnsby had to perform an urgent operation upon her in a state of exhaustion the day after the spontaneous perforation of the cyst into the bladder. In the course of the operation the tumor was found to be everywhere adherent; it burst, and proved to be a suppurating dermoid communicating with the bladder. The appendix, of which the lower third, bent and obliterated, contained pus, was adherent to the wall of the cyst. There was also a large uterine fibroid and hydrosalpinx on the left side. The cyst and the appendix were removed, the breach in the bladder stitched up, and a supravaginal hysterectomy performed, leaving the left ovary intact. The recovery was uninterrupted and complete.

On Cæsarian Section.

H. Olshausen (*British Gynecological Journal*, February, 1906) in this article gives his experience of 118 cases: ninety-one were on account of contracted pelvis, seven for eclampsia, six for myoma and four for carcinoma of the uterus, four owing to vaginal fixation, two to nephritis, two to disease of the heart, and two to cicatricial stenosis of the cervix or vagina. As regards technique, Olshausen recommends that the incision in the abdominal walls should be very high up, and that in opening the uterus the placenta should be avoided. Hemorrhage need not be dreaded if certain rules are observed, especially if ergotin is given before the operation, and if the incision in the uterus is made as exactly as possible in the middle line. In seven women the operation was performed twice, in two thrice, and in three four times. Of ninety-one operations for contracted pelvis, nine were fatal, and Olshausen had operated himself in three of these. His assistants, out of twenty-six cases, had six deaths.

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ORIGINAL CONTRIBUTIONS.

THE CLEANLY CONSUMPTIVE.

BY A. L. BENEDICT, A.M., M.D., BUFFALO.

Tuberculosis is a disease to which almost every human being is theoretically susceptible, and, indeed, several German necropsy records show the existence of active, latent, or healed foci in nearly 100 per cent of the series.

It is a disease to which about 10 per cent of human beings actually succumb, in most temperate climates, with civilized populations. Excluding deaths at the extremes of life and from violence, the mortality from tuberculosis is nearly 25 per cent. Further excluding acute infections, which are somewhat analogous to traumatic fatal accidents, very nearly a third of the human race is shown to be susceptible to tuberculosis, to such a degree that death is to be expected, unless under most approved modern methods of treatment.

In spite of some laboratory experiments as to specific immunization, no true immunization against tuberculosis has been accomplished, and the disease confers no immunity against subsequent attacks, as do the exanthemata and certain other infections. Indeed, recognizable tuberculosis, not limited to a surgically accessible focus, is fatal in at least 75 per cent of any large, average series of cases.

Tuberculosis is the only general infection, susceptibility or insusceptibility to which depends, to any practical degree, upon the general health of the body. Conditions determining susceptibility are present, at one time or another, in every person, infection depending upon the coincidence in time of two factors, each of which is practically inevitable at some time—failure of resisting power, whatever this may mean scientifically, and contact with the living germ.

A potentially adequate implantation of the germ occurs in tuberculosis by inspiration, ingestion, or even external contact upon a broken skin or mucous or mucocutaneous surface, or by accidental

deep implantation. No special means of implantation, as in malaria and the other essentially insect-borne diseases, or the venereal diseases, and no special exposure to contamination, as in the case of typhoid and cholera, or to specially contaminated geographic areas, as in cholera, trypanosomiasis, plague, yellow fever, etc., is necessary, nor is there any essential positive or negative susceptibility by virtue of age, sex, physiologic period, occupation, nationality, etc., although such circumstances may indirectly favor or prevent infection.

While, in the pathologic and bacteriologic sense, tuberculosis is very widely distributed throughout the higher phyla of the animal kingdom, human beings are pretty positively shown to be susceptible to tuberculosis only from germs infecting mammals. Under ordinary natural and economic conditions, the only animals which develop tuberculosis capable of infecting man are cattle and certain domestic pets, and household vermin, the latter in isolated cases and under conditions which may be considered to place them, for present purposes, in the same category with human beings. While Koch's dictum as to the mutual non-transmissibility of human and bovine tuberculosis has been positively disproved, by experiment and clinical accidents comparable to laboratory experiment, it is generally conceded (1) that there is an essential difference of variety between human and bovine types, and (2) that, even if this were not so, the opportunities for infection from animal sources are comparatively insignificant. The most frequent source of human tuberculosis with bacilli derived from economic animals is milk, and this from its use affects chiefly young children. Even tuberculous cows do not necessarily yield tuberculous milk, and a child drinking tuberculous milk and developing tuberculosis has not indubitably been infected from this source.

Unlike tetanus, non-specific sepsis, and possibly some other infections, there is no spontaneous, outdoor source of tuberculosis. In other words, the tubercle bacillus, though able to survive for some time outside the animal body—almost indefinitely, indeed, in a dry, dark nidus at a stable temperature—is an obligate parasite. It may have evolved from the hay bacillus, but it is, as known historically, distinctly a parasite, and so far as varieties affecting man are concerned, essentially a parasite of man himself and of his immediate associates in the mammalia.

Unlike various animal parasites, the tubercle bacillus is infectious at any period of its life history, unless while in what may be considered a dying state, or when it has been artificially mitigated in virulence, though still capable of vegetative growth and reproduc-

tion. This statement is true for all bacteria that produce disease, at least in the practical sense that there is no distinguishable and measurable period of non-infectiousness, according to age.

All the foregoing may be summed up in the statement that if every case of human tuberculosis, and of essentially human tuberculosis existing in the lower animals, could be removed, and if the bacilli existing free from such cases could be subjected to natural vicissitudes of sunlight, alternations of temperature and moisture, etc., for a few months—perhaps even for a few hours of daylight—tuberculosis in the ordinary clinical sense would be exterminated. There would remain occasionally cases of a quite distinct type, not especially infectious for other human beings, and easily guarded against by the sanitary regulation of bovine meat and milk supply.

Of the various forms of human tuberculosis, consumption, or at any rate respiratory tuberculosis, is by far the most common. The writer does not know of accurate statistics showing the relative prevalence of respiratory as compared with other localizations of tuberculosis, but it is probably a conservative estimate that 75 per cent of all tuberculosis occurring in human beings can properly be designated as consumption, or at most as respiratory tuberculosis.

Respiratory tuberculosis is the only form, under ordinary circumstances, which tends to disseminate the bacilli generally. Miliary, glandular, bone, joint, and central nervous and serous tuberculosis are either enclosed or become subject to surgical treatment under antiseptic precautions. Alimentary, urinary, aural, and neglected surgical discharges, even if not properly treated under medical or surgical advice, are not subject to so frequent and ubiquitous discharge of bacilli into the outer world as is respiratory tuberculosis, while ordinary notions of decency and esthetics tend to prevent the immediate transfer of such discharges and to favor sterilization by natural vicissitudes, including the action of saprophytes, before opportunity is afforded for fresh implantation into another human being.

Medicine is no less subject to oscillations of opinion and fashion than ordinary affairs. At present it is the fashion to regard the consumptive as not a practical source of danger, if reasonably cleanly in his habits. It is claimed that the conscientious individual can be instructed so as not to be a source of danger, and that any attempt to quarantine the consumptive—in other words, either to remove him from his family or to interdict his free use of the streets, public conveyances, public gathering places, hotels, boarding houses, etc.—is cruel and unnecessary, and that the word contagious is not applicable to this disease.

The writer is a phthisiophobe, not in the sense of having any

personal anticipation of tuberculous infection nor to the extent of regarding tuberculosis as analogous in its degree of infectiousness to measles, scarlet fever, and smallpox, but in the sense that he regards the origin of human tuberculosis as human tuberculosis in 95 per cent of cases, and that he believes that the enormous economic and social importance of this disease warrants united and stringent measures directed at its principal source—the human consumptive.

Direct, occasional contact with a consumptive, in ordinary ways, is certainly not an appreciable source of infection. In such contact the *materies morbi*, the sputum, is moist, its contained bacilli do not tend to be readily disseminated, and the sputum is visible and easily avoidable. To use a very prosaic comparison, there is not much more danger of being infected from such a source than of being soiled by the discharges of a companion with diarrhea. But who has escaped at least occasional contamination of foot-wear or clothing from human excrement dating back to unknown, previous visitors to parks and highways? A very large proportion of the human race has, by the development of typhoid, demonstrated that such excrement has even been imbibed. It is impossible to show whence any particular case of tuberculosis has been derived, excepting in laboratory experiment or in exceedingly rare clinical cases, in which the conditions of laboratory inoculation have accidentally been duplicated. Even when we trace a case to another close associate, we do so only in a probable sense.

Every case of tuberculosis with an avenue of discharge is a potential source of other cases. There is, of course, a wide quantitative difference between the patient who spits in street-cars, in his own hot-air registers, who kisses his children, and who shares his bed with another member of the family, and who goes from room to room, from house to house among his relatives and friends, from sleeping-car to hotel, and who everywhere spits and slobbers freely, and the partially quarantined consumptive who understands his sanitary condition, who is cleanly, and who carries a sputum receptacle which is properly emptied and disinfected.

But it should be clearly understood that the difference between the clean and careful and the filthy and malicious consumptive is purely one of degree, so far as the propagation of the disease is concerned, just as there is a quantitative difference between the patient with a scanty discharge from fibroid phthisis and the one with a copious and culturally rich sputum.

It has been demonstrated that the air quietly exhaled is nearly free from bacteria acquired in the respiratory passages. It has, on the other hand, been demonstrated that violent expiration, coughing,

and sneezing emit bacteria in abundance corresponding somewhat to their abundance in the respiratory passages. During sleep, even normal individuals occasionally manifest not only these reflexes, but spit. Every one who has had experience with patients coming out of anesthetics learns that accumulated saliva or mucus tends to produce reflex spitting. So, too, during sleep there is frequently in normal individuals, and especially in persons with any sort of nasal obstruction, so that mouth-breathing is necessary, more or less drooling upon the pillow. Consumptives, like persons with non-specific catarrhs, have to use the handkerchief freely, and it is impossible for them to be constantly using antiseptics. Indeed, there is none that they can use in efficient strength that would be tolerated for anything like constant use. Contamination of the nostrils and lips, thence the hands, is inevitable. The fingers are, indeed, almost inevitably contaminated from use of the handkerchief alone. From the hands, the hair, clothing, gloves, furniture, towels, books, eating utensils, etc., cannot conceivably escape infection. Of course, at any given time there may be a lack of specific contamination of the sputum, or the respiratory orifices, and in the successive transferring movements a failure to extend the contamination will very likely occur, even in the presence of an initial contamination. But if the various motor acts liable to convey infection occurred only about once in fifteen minutes, including sneezing, coughing, using the handkerchief, scratching the head, touching the lips and nose, etc., 100 such possible means of spreading tuberculous matter would occur in a day, and in a week or a month it is incredible that all such acts would result negatively.

Without tallying them, the enormous number of handling acts performed during the day is not appreciated. The writers found that at one dinner, eaten alone, so that nothing was passed to any one else, and with very little use of relishes and no great number of side dishes, he touched thirty dishes (including cup, glass, coffee-pot, salt shaker, cream and sugar bowl, etc.), fourteen metallic utensils (knives, forks, spoons, nut-picks, etc.), and three cloths (napkin, table-cloth, and doily). Supposing the user to be consumptive, here are forty-seven articles liable to contamination at one meal. A very conservative estimate for meals alone would be 100 articles liable to contamination in one day. When we consider the great amount of paraphernalia of civilized life, it is difficult to comprehend how even the cleanly and careful consumptive can fail to produce pretty general contamination of his environment, in the course of a few weeks, merely by the manual transfer of bacilli, not to mention the inevitable contamination of sneezing, coughing, and drooling at night.

Moreover, it must be admitted that every consumptive, unless dying quite suddenly at the end, passes through a variable period, usually a month or more, in which sheer weakness or actual hebetude of mind removes him from the careful and conscientious class.

It is perfectly possible to institute a species of quarantine at the consumptive's home which shall be absolutely efficient. But this possibility is exactly analogous to the possibility of converting the patient's home into a satisfactorily lighted, equipped, and aseptic operating-room for a major surgical procedure, or the possibility of caring for an insane patient at home. When we speak of such things as possible, we imply considerable wealth and rather exceptional circumstances. In any case, while the patient does not change his residence, his social environment has been as completely changed as if he had gone to an institution intended for the special care of the respective kind of trouble.

For a consumptive to maintain anything like ordinary domestic and social habits implies the inevitable contamination of his environment and the possibility of infecting others during the course of his sickness. According to individual circumstances, the resulting risk may be great or it may be insignificant. At any rate, this risk applies to his immediate family, and the responsibility of it may be borne by them. Owing to the rapid disinfecting action of sunlight on tubercle bacilli, the use of the highways by a consumptive who uses a spit cup and who seldom coughs or sneezes is very slight. So, too, his use of public conveyances and public meeting places for brief periods is not fraught with great danger. When he sleeps and eats outside the cordon of local quarantine the danger is enhanced —how much cannot be estimated.

Very incomplete and unsystematic efforts to treat tuberculosis as a communicable disease have already reduced its incidence considerably, if statistics can be relied upon. The conclusion seems justified that a general compulsory system of quarantine which would necessitate the segregation of tubercular patients with a discharge at convenient isolated sanitariums would ultimately, perhaps even within a comparatively few years, result in an almost total annihilation of the disease. Such a method would be inhumane to the patients, in the same sense that any restriction of liberty and choice of mode of life is inhumane. Experience has already shown that it would not be inhumane in the physical sense for the aggregate tuberculous population, since it would result in the cure of a much larger proportion of such patients than is now possible. Without universal government control it is impossible to secure anything like absence of opportunities for infection of the susceptible, so that at

present the private practitioner may feel justified in allowing the fairly cleanly consumptive considerable liberty from the theoretically desirable quarantine. But this policy must be regarded as justified by merely temporary conditions that warrant the application of the rule that one cannot spoil bad eggs.

MERYCISM.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Merycism—the curious phenomenon of rumination, the voluntary act of regurgitation for the purpose of remastication—is the normal method of procedure in a large class of the mammalians, and is not uncommon in the genus homo; but in the latter it may be regarded as distinctly pathological, in that it is a departure from the normal method of preparation of the food for the second stage of digestion.

In the human being merycism usually occurs in persons who are inordinate eaters, those who do not properly masticate their food before it is swallowed, and especially when there is superadded a degenerate, neuropathic, or neurasthenic tendency; but it may occur as a result of prolonged mental strain—in fact the condition usually bears a remarkable parallelism to the degree of neurasthenia which may be present in the individual case.

The habit of rumination has been claimed to be hereditary, there being several cases on record in which both father and son were the subjects of merycism, but in the opinion of the writer this theory is only entitled to secondary etiological consideration, as the influence of example and habit probably have more to do with the condition than heredity. As a matter of fact, it seems exceedingly questionable whether or not a single factor other than habit, coupled with a neuropathic inheritance, can be considered significant in studying the etiology. This theory, however, may not be susceptible of positive and definite substantiation by illustrative facts.

It has been stated by many observers that there always exists marked disturbance of the gastric secretions in the subjects of merycism, that this faulty secretion is the primary causative factor, but there appears abundant evidence to prove the fallacy of this theory, as subjection of the stomach contents (by artificial withdrawal after a test meal) to elaborate and painstaking investigation has shown that the gastric secretions were normal in all particulars. Thus another theory is clearly disproven.

There can be little doubt that anything which tends to lower the normal tone, or pervert the nervous mechanism, of the individual

may act as a predisposing cause of merycism, and in so far as there may be transmission of a vitiated nerve tone heredity possibly plays a part when considered together with the influence of example as hereinbefore intimated. The older writers undoubtedly had this hereditary influence in mind when they declared that the subjects of merycism descended from the herbivoræ, that their ancestors possessed two stomachs, as do many of the lower animals.

The comparative frequency with which merycism is encountered among the insane, together with the fact that the history of the condition shows it may often be voluntarily produced or entirely suppressed, most positively indicates that its prime etiological factor is nervous in character, though inadequate and improper mastication of food, of which the individual may partake, may play not an unimportant etiological rôle. Cases have been reported in which rapid and inordinate eating appeared to be productive of merycism, where no neurotic tendency was discoverable; but in those instances it seemed an attempt on the part of nature to secure adequate preparation of the food by remastication, and after regurgitation and thorough remastication proper digestion, assimilation, and nutrition followed.

Regurgitation usually takes place between ten and thirty minutes (probably an average of fifteen minutes) after food is swallowed; sometimes even during the progress of a meal portions of the food are returned and the process of rumination begins; but not infrequently the time is delayed to an hour or more, varying in each individual case and depending largely upon the size of the meal, the haste with which it has been partaken, and whether or not it was followed by violent exertion. A much longer time is generally consumed in the second than the original mastication of the food, and in some instances food is only regurgitated at certain stated intervals, it may be immediately after meals, or at various other periods.

Critical examination of food regurgitated soon after being swallowed has shown that the process of digestion had barely commenced, and that the food was still sweet and pleasant to the taste. As already indicated, analysis of the gastric secretions has been productive of so widely varying and inconsistent results that no definite conclusion can be formulated as to the changes therein, if any, which are most likely to occur. Chemical examination in most instances has shown nothing departing from the normal, therefore nothing consistent has been proven.

Attempts have been made at different times by various writers to classify the abnormality known as merycism under two general headings, viz., the simple and pathological forms, the latter being

theoretically subdivided into several so-called independent varieties, depending upon the degree of gastric disturbance which may be present. In the estimation of the writer such a classification is not only unnecessary but confusing, as it can hardly be considered that merycism of any degree belongs elsewhere than in the category denominated "pathological," and no subdivision seems requisite nor can it change the facts. It is probable that in most cases a low grade of gastric irritation is primarily present, which by reflex action may conduce to a desire to regurgitate the food; this local irritation in some instances may be the result of slight pathological change, in others purely a manifestation of impaired nervous tone; but as the ultimate result in either event is the same, no particular significance attaches to the feature of irritation, except in so far as treatment may be concerned, of which more extended mention will be made presently.

Merycism has but infrequently been observed in the female sex, which appears remarkable, inasmuch as neurotic manifestations of all kinds are generally found much more common in females than in males; yet this particular abnormality is apparently confined almost exclusively to the male sex. So far as the writer can ascertain, no satisfactory explanation has ever been offered or suggested for the immunity of females to this disorder, nor is he aware of any investigation having been undertaken in an attempt to discover the reasons therefor. In this connection, however, it might be well to add that Ludwig and several other observers have recorded numerous cases of merycism in females, and attempted to show that there was no certain evidence as to the influence of sex.

Rumination has been observed at practically both extremes of life—from five to seventy years—but it is most common during the period of greatest nervous activity, between fifteen and forty years. In some of the cases encountered in elderly subjects the abnormality was said to have existed almost without interruption and without appreciable change since boyhood. A number of observers claim the condition is most frequently met with in children, but this does not appear to be borne out by facts.

Another feature which deserves especial mention is that in the great majority of cases little influence appears to be exerted upon the general health of the individual, although he may practice the act of rumination at frequent intervals, perhaps remasticating a certain percentage of each meal of which he partakes, for months or even years. The general health suffers only when gastric disturbance supervenes, and evidence goes to show that this does not occur in the majority of instances. It is the rule that so long as the food is properly remas-

ticated and the taste thereof remains pleasant, the general health remains good. And if a physician be consulted it is usually for relief of some intercurrent trouble, and the abnormality known as merycism is then incidentally discovered.

The mechanism of the condition starts with the act of regurgitation, which is preceded by a rapid inspiratory effort and simultaneous closure of the glottis, during which the diaphragm is forced downward, with contraction of the stomach walls, so drawing the contents of the stomach through the cardiac orifice; this is immediately followed by a deep expiration to prevent the return of the food. The stomach contents are regurgitated to the mouth in small quantities, then masticated and again swallowed, the process being repeated at intervals until complete digestion has ensued or another meal has been partaken (Somers).

Bouchard has published the clinical history of a ruminating family. Out of ten living members eight ruminated, viz., two brothers and an aunt, the grandfather, and four grandchildren.

According to Larrier no especial change in the chemistry of the saliva and gastric juice has been proved to be associated with merycism, but human ruminants are often dyspeptics with sensory-motor phenomena. Involuntary merycism, especially in the earlier stages, is especially prevalent among dyspeptics who suffer from any of the neuroses. Voluntary rumination, as a bad habit, is a practice observed most frequently among idiots, lunatics, and degenerates—a true intellectual perversion. Yet voluntary rumination may be the result of imitation in fairly sane subjects. On that account it is relatively common among children. No malformation or lesion of the stomach or esophagus has been detected in any case.

Brown-Sequard is said to have suffered for a time from this peculiar complaint, brought on by experiments made upon himself to determine the time required for digestion of various alimentary substances. In conducting these experiments he enclosed the articles of food in a sponge to which a string was attached, and after a time he brought up the sponge by traction on the string. Soon he found that the sponge was returned spontaneously, and subsequently whatever he swallowed was returned in the same way.

Blanchard, himself a ruminator, has testified to the pleasurable sensations experienced in the act, and even confessed to having occasionally selected certain articles of food which his previous experience had taught him would most promptly cause rumination, or which would have a specially agreeable taste when masticated a second time.

Hubbard reports a case of merycism in a farmer aged thirty-five

years. He had contracted the habit at a time beyond his recollection, and there had been no intermission in its practice until one month previously, when it suddenly ceased, and it was for this reason he consulted medical aid, as cessation of remastication of the food had been followed by distressing digestive (gastric) disturbances. He had almost constant nausea, although emesis was found to be impossible. It had been his habit to swallow his food hurriedly with as little mastication as possible, then retire from his family or associates, when the process of regurgitation immediately began and continued for twenty to thirty minutes. He had been an inordinate eater, and his general health had been perfect until sudden cessation of rumination took place.

Cascella also reports a case of merycism occurring in a male, and after reviewing the various theories in regard to this abnormality concludes that whether the habit is a morbid symptom or merely a reflex phenomenon, which by constant repetition becomes a perversion of the digestive function, it is always the expression of an atavistic functional phenomenon, and it is oftenest seen in persons who possess other signs of degeneration.

Somers records the clinical history of a case of rumination in a boy aged five years whose family history was negative except that an uncle and cousin on the maternal side were unable to talk until after their sixth year. The boy was normal and fairly intellectual up to his third year, when following an attack of measles he became almost totally deaf and was unable to talk. At the age of five, when seen by Somers, he was robust in appearance, but his head showed marked evidence of hydrocephalus; the hard palate was "Gothic;" tonsils hypertrophied; both membrana tympani thickened and retracted; he could not hear watch or voice; bone conduction normal; pharynx sclerotic, and was unable to talk. After appropriate treatment the child was able to talk fairly well and his hearing was restored. Six months thereafter he first began to regurgitate and remasticate his food, which was apparently done with greater enjoyment than taking the original meal, and it occurred principally from one-quarter to one-half an hour after eating. The boy at this time was apparently markedly neurasthenic.

Halliday reports his own case, a part of which is reproduced in his own words: "Since my boyhood I have had this power of regurgitating and remasticating my food at will. Indeed, it became so habitual with me that I put the operation into practice after almost every meal, particularly after dinner or when I had taken any specially solid food which I had not thoroughly masticated—*e.g.*, pieces of meat, hard-boiled egg, etc. It never caused me the slightest

discomfort to go through the process, and the food, instead of being in any way disagreable, was rather rendered more palatable, this being accounted for, no doubt, by the partial conversion of the starchy part of the meal into sugar. . . . I have perfect control of the process, and although I may, indeed, do it involuntarily, still I do it in the same way as I would, without actually thinking of what I was doing, go and fill and start to smoke my pipe. On these grounds, then, I am led to consider the whole thing merely a matter of habit, and not due to the condition of the gastric secretion. . . . Nausea, pyrosis, pain, or distress referable to the stomach are subjective symptoms which I never experience; neither have I epigastric tenderness, nor am I neurasthenic."

Merycism was described by many of the older writers in medicine, *e.g.*, Bartholinus, Paulinus, Blanchard, Bonet, Horstius, Morgagni, Peyer, Vogel, Laurent, and many others. It is stated that Fabricius d'Aquapendente personally knew a victim of rumination. The dissection by Bartholinus of a merycol showed nothing extraordinary in the cadaver.

Winthier knew a Swede of thirty-five, apparently healthy, who was obliged when leaving the table to retire to some remote place where he might eject his food into his mouth again, saying that it gave him the sensation of sweetest honey. The patient related that from his infancy he had been the subject of acid eructations, and at the age of thirty he commenced rumination as a means of relief.

Hammond reported the case of a young man who was the subject of merycism and whose mental condition was also impaired. Both sides of his head were trephined and rumination ceased, but whether the cure of the merycism was directly due to the operation on the cranium or the result of mental improvement does not appear positive. Hammond declares that when acquired merycism is almost invariably the result of overeating and loading the esophagus, or the result of fast eating.

Knapp mentioned two cases, both in physicians, one of which he reported in detail. A man aged thirty had regurgitated his food since early childhood. He was not nervous and certainly not an idiot. He had performed active work as a physician and was considered to be in perfect health. He was something of an epicure, and never suffered from indigestion. After a hearty meal regurgitation was more marked; in the remastication the food tasted as good as when originally eaten. Regurgitation in this case was said to have taken place sometimes several hours after the original meal had been consumed. Attempts to check regurgitation were followed by a sense of fulness in the stomach.

Concerning the treatment of merycism there is little to be said. Of course the prime requisite is to remove or correct the cause, so far as this may be possible. Rapid and inordinate eating should be interdicted. Only easily digestible and readily assimilable foods should be allowed, and these should be taken in moderate quantities and at regular intervals. Errors in the manner of eating should be carefully corrected. Food should be carefully masticated and generously intermixed with the salivary secretions before being swallowed. Fluids of all kinds should be prohibited during meals and for half an hour thereafter, provided solid food be taken. In some obstinate cases it may be advisable to withdraw all solid food temporarily until the tendency to regurgitation becomes diminished. An effort should be made, if it becomes necessary, to repress the movements which favor regurgitation, and the dorsal or other posture unfavorable to the act be assumed for half to three-quarters of an hour after each meal. Many of the well known "gastric sedatives" are oftentimes useful. Tonics and laxatives are of signal service in certain cases. Strychnine in moderate doses has resulted beneficially, and electricity is perhaps entitled to more consideration in the treatment of this condition than has been heretofore accorded this method.

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ANEURISM OF THE AORTA.

BY FRANK BILLINGS, M.D., CHICAGO, ILLINOIS.

This patient is forty-five years of age; resides in the city; bricklayer by occupation; was born in the United States. He was admitted to the Presbyterian Hospital on the 29th of January, at which time he gave the following history: His father died at the age of seventy from some unknown cause; mother died at the age of forty following childbirth. Two brothers and one sister are living and well; no brothers or sisters dead. There is no family history of tuberculosis, of malignant disease, or of heart disease. The patient is the father of five healthy children, the oldest thirteen and the youngest four. He has had the diseases of childhood. When nine years of age he had an attack of what he called "typhoid pneumonia," which confined him to bed for a period of three months.

He made a complete recovery from this. When eighteen years of age he had an attack of specific urethritis, which lasted for two or three weeks, after which he was well. He denies any other venereal infection. Previous to the beginning of his illness he worked at his trade steadily for twenty-seven years. While his work has been heavy most of the time, he has never had to use any violent exertion at any time. He uses alcohol in the form of beer and whisky in moderate amounts; he takes on an average not more than one drink a day; he has drunk none during the last ten months. He smokes a pipe moderately; uses tea and coffee in moderate amount. He has lost thirty-five pounds in weight within the past year.

Six years ago the patient first felt a sharp pain in the region of the right shoulder, which came on suddenly while he was at work. He describes this pain as severe, beginning in the anterior portion of the chest, about an inch to the right of the right nipple, and passing directly backward through the shoulder, and from the shoulder-blade extending downward along the side of the chest, and sometimes across to the opposite shoulder. Pain was not increased at that time by motion of the shoulder-joint. At first the pain would last for a period of from one day to a week at a time, and then it would disappear for a month, but gradually increasing in severity and frequency of recurrence until fifteen months ago, since which time it has been continuous and patient has been incapacitated for work. About a month ago, after patient stopped work, he noticed that his voice was failing, and thought this was due to having taken cold. At about the same time dyspnea came on, which was worse on exertion. This pain at the present time is continuous; it is of a dull, aching character, and is made worse if the patient should take cold, or if he occupies a cold room, or if he walks or stands for a long time. It is relieved by sitting down or by leaning forward. It is always worse in cold weather. His appetite during this time has been fairly good; bowels usually constipated.

Physical examination at the time the patient was admitted to the hospital was practically the same as it is now, except that the symptoms and signs are a little more marked now than they were then. I will not read what was said at that time, but enumerate symptoms as I go on, excepting this: His pulse has been rapid since admission. The first night it was 100 to 108. Now his pulse ranges from 80 to 100. His temperature has been slightly elevated, sometimes subnormal. It has reached 99°, but has never been a febrile temperature. The urine on admission was concentrated, the specimen having a specific gravity of 1038, with a faint trace of albumin, but no casts were found. There were many leucocytes found in the specimen.

A twenty-four-hour collection made soon after his admission gave only 520 cubic centimeters, with a specific gravity of 1035, a faint trace of albumin, but no sugar; no casts, many squamous epithelia, a large number of leucocytes, but no red cells; urea 3.4 per cent, 17.6 grammes in twenty-four hours, and 42 grammes of total solids. Blood count on admission showed 5,800,000 reds, hemoglobin 80 per cent, 9440 whites. His blood showed 125 milligrammes pressure; another blood-pressure taken three days later showed 115 milligrammes. A sphygmogram shows the difference in the pulse tracings, the left pulse tracing being much less in simplitude than the right. A tracheal tug is present.

As I have said, physical examination made at the time of his admission was practically the same as that of to-day. There is not much to be seen, excepting perhaps the left side of the chest is a little more elevated than the right in the mammary region. The internal mammary vein is not enlarged in any of its branches. The radial pulses differ; one can easily get a difference with the patient in any posture, sitting, lying, or standing; the left is much smaller than the right, and the waves not as distinctly felt. The apex beat of the heart cannot be seen or felt. I have outlined the area of percussion dulness, which extends pretty near to the middle of the clavicle on the left side. On the right side dulness begins at the sternal junction with the clavicle, and is easily ascertained, so that we have it extending down to the sternum in the direction I show you, and across in this way (indicating). It was evident throughout the area I have shown you when he was admitted, but now it extends fully one inch to the left of the original boundary. On listening over this area there is nothing to be heard excepting a fast heart-beat, with the long interval of the heart-beat diminished. There are no murmurs to be heard; no thrill to be felt. Associated with the history is the change in the patient's voice which he noticed himself, and on laryngoscopic examination it has been found that the left vocal cord is paralyzed and motionless, due of course to paralysis of the left recurrent laryngeal nerve.

Let us review briefly the symptoms in this case. First of all, pain, which was intermittent at first, and perhaps had something to do with his work, being aggravated by cold, standing or walking, but gradually becoming in time continuous and decidedly aggravated by physical effort, and associated later with shortness of breath. The pain runs only to the shoulders, and associated with it we have paralysis of the left vocal cord.

I will now show some skiagraphs of this case, one of which is taken from the front, showing a shadow to the left almost in

the line of the apex. Another was taken from the back, which throws a shadow on the opposite side. In this skiagraph, which was taken with the patient lying on his back, you can readily see a shadow, beginning at the clavicle, and recognize the fact that dulness would begin at the clavicle on the left. On the right side it begins at the sternoclavicular junction, and runs almost vertically along the sternum. On the left side there are seemingly little nodules or excrescences upon the sac itself. It has been suggested by Dr. Smith, who took these skiagraphs, that there is possibly a deposit of calcium salt at these points. It can hardly represent anything more than an irregularity in the wall of the sac.

This is a plain case of aneurism of the transverse arch, one which requires no differentiation from, for instance, mediastinal tumor.

The patient has improved since he has been in the hospital, because of the rest and diet he has had. He is allowed to have all that his appetite craves. He is not allowed to take much fluid while eating, but drinks a good deal of water between meals. His bowels have been kept open. He has been placed on ten-grain doses of iodide of potassium; chloride of sodium was later added to the iodide of potassium, hoping that it would increase the coagulability of the blood, and thus give an opportunity for improvement by the formation of a clot in the sac.

In Voslau, about twenty miles from Vienna, a cold sulphur spring has been discovered which will soon be used for medicinal purposes. The village is famous for its mild thermal waters, which possess a high degree of radioactivity. It is about two miles from Baden, a well-known bathing place, where there are seven hot sulphur springs. As the geological conditions of the two places are nearly identical, sulphur water has been sought for in Vienna every now and then, and at last with success. The new spring comes from tertiary sands, has a temperature of 9° C., and contains large quantities of sulphuretted hydrogen, and carbon dioxide. The constituents of the water have not yet been exactly determined, but its radioactivity has been proved by the presence of an emanation which could be made to act on fluorescent screens. The therapeutic value of the spring remains to be found by experience. Whilst the hot baths of Baden are employed in rheumatic affections of all kinds the cold sulphur water may act as a cathartic to clear the intestinal canal and to expel metallic poisons, such as mercury, lead, or arsenic, from the system.

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EDITORIAL ARTICLES.

AN INFALLIBLE CURE FOR SEASICKNESS.

The summer season affords many longed-for opportunities of travel, and those who travel on water will still continue to hurl maledictions on science, that as yet that bugbear of ocean travel, the dreaded mal de mer, has not been brought into the realm of the known, and its uncomfortable symptoms mitigated by the beneficent aid of science. Theories still crowd each other out, as they attempt to explain this malady, though there now seems to be a consensus of opinion that something in the nature of a vertigo is at the base of all the trouble.

Among recent contributions to the therapy of seasickness Wolf (*Wien. klin. Woch.*) suggests a method which he declares is infallible for the cure of the malady. When we do not feel comfortable on a voyage, the first thing to be done is to stretch out at length on a sofa or a steamer rug on the deck. If clothing is tight, it should be loosened at every point of pressure, and with women it is always best to remove the corset. A vessel containing hot water and two towels are all that is necessary to continue the battle with the enemy. The water should be very hot, at least 80° centigrade. The two towels are dipped in the hot water and applied to the frontal region of the head, as hot as they can be borne, and rapidly alternated.

At first these compresses to the head are badly tolerated, but after a little time a sense of well-being pervades the patient's body. The treatment must not, however, stop at this point, and the compresses must be further applied as hot as can be borne.

Eating, drinking, and smoking do not hinder the beneficent effect of this cure, and after half an hour or even an hour of this all danger of seasickness is overcome.

This prescription ought to be followed very rigorously to prove successful. The invalid should not drink anything during the treat-

ment until he experiences a true thirst. At first he should take a little tea without milk and a piece of toast. After two hours he can eat tranquilly whatever the ship commissary provides for him.

Thus according to this authority, after several centuries of fruitless effort, after hope and despair painfully alternating and recurring, the infallible cure of seasickness is found by this learned Austrian professor to consist of hot compresses to the brow.

EDITORIAL NOTES.

The Uses of Goat's Milk.

Goat's milk, which is largely used in the mountainous districts of Europe, has never attained much popularity in this country. Some time ago a paper was read before the New York Academy of Medicine by Dr. Finley Beel, in which he advocated the use of goat's milk in infant feeding. He reported a number of cases of wasting infants in whom improvement began as soon as they were put upon a mixture of goat's milk and water, instead of cow's milk modified in various ways. Among the advantages which the essayist claims for the goat, to quote his own words: "She is more docile, less excitable, not subject to tuberculosis or other disease in this climate. Being a browser rather than a grazer, she will thrive when cows would not, and, above all, she is cleanly. Her excrement is solid and her tail short, consequently she is not covered with manure as is the cow. It is safe to assert that the production of cow's milk free from manure bacteria is commercially impossible. Not so with the goat; she can be easily washed (tubbed if necessary) and aproned for milking. I believe an assured non-contaminated goat's milk supply is not only commercially possible but profitable."

Vacation Time.

The beautiful June days that are now upon us certainly have the effect of making every one long to get back to nature. If we follow the advice we are constantly giving to others, we will seek a change if only for a short time. No class of workers need this yearly change more than physicians. The daily grind of the average general practitioner at this season becomes especially irksome. How to best spend a vacation is a question that each physician can best answer for himself. But after all, the main thing is to get out of the well-worn groove for a time; to cease acting the professional man from early morning till late at night; and to meet people and not to have to listen to tales of woe and distress.

ITEMS AND NOTES.

TYPHOID FEVER is still rampant at Pittsburg.

THE art of pulse-taking in modern times dates only from 1707.

OHIO is complaining of the large number, and the audacity, of her quacks.

A UNIVERSAL hygienic exposition will be held in Vienna, May 12 to July 15 of next year.

THE annual meeting of the New Jersey Medical Society was held at Atlantic City, N. J., June 9 to 21.

ON April 17 the free alcohol bill was passed by the House of Representatives by a vote of 224 to 7.

A CASE of yellow fever has been reported from Matanzas, the diagnosis being confirmed by autopsy.

SACRAMENTO, the capital city of California, has a city law that forbids the sale of medicines in the streets.

A NATIONAL committee for the promotion of physical education has been established in Italy. It has its headquarters in Rome.

THE British Medical Association will hold its seventy-fourth annual meeting at Toronto, Canada, August 21, 22, 23, 24, 1906.

DURING the session 1904-5 there were at Edinburgh University 1481 matriculated students of medicine, as against 1487 in 1903-4, and 1427 in 1902-3.

THE American Association of Life Insurance Examining Surgeons held its seventh annual meeting on June 4, 1906, in Boston, Mass., at the Hotel Thorndike.

DR. JOKICHI TAKAMINE, the well-known Japanese chemist of New York, has received the decoration of the Order of the Rising Sun from his majesty the Emperor of Japan.

THE licensing of osteopaths in the State of New York as embodied in a bill which passed the Senate failed to pass the Assembly at a recent session of the legislature.

THE American Laryngological Association held its twenty-eighth annual congress at Niagara Falls, N. Y., on Thursday, Friday, and Saturday, May 31, June 1 and 2, 1906. The sessions were held at the New Prospect House.

THE Hartford, Conn., Medical Society has received a legacy of $100,000 through the will of a prominent Connecticut physician, Dr. Bacon. The money will be used as an endowment fund.

THE class of 1909 of Cornell University on May 18 presented to Dr. Austin Flint a silver loving cup in memory of his retirement from the chair of physiology on account of reaching the age limit.

PROF. WILHELM OSTWALD has resigned the professorship of chemistry at the University of Leipsic, as a result of his displeasure at the lack of support accorded to his chemical researches. He will establish a private laboratory.

ACCORDING to the Chicago *Record-Herald*, the mayor of Chicago, on the recommendation of a State home visitor for children, has revoked the license of an institution known as the How Maternity Hospital and School of Midwifery.

MR. WILLIAM BARNUM, chief clerk of the Carnegie Institution of Washington, announces that the issue of the *Index Medicus* has been unavoidably delayed, owing to the recent printers' strike in Boston, where the periodical is printed.

A BILL, known as the Parks Anticigarette law, passed some time ago by the Indiana legislature, has been declared valid by the Supreme Court. To sell cigarettes or to keep them for sale is illegal; it is not, however, illegal to bring them into the State or to smoke them.

THE ambulances of the police department of Chicago will soon be turned over to the city health department, in accordance with the plans of the health commissioner and the chief of police. The eight ambulances to be transferred will each be under the charge of a physician.

THE Ontario Medical College for women, founded twenty-three years ago, is to be discontinued. Owing to the admission by Toronto University of women into the same medical course as men, the attendance has been gradually dropping off at the Ontario Medical College, and the managers do not consider it advisable to continue the institution.

MAJOR JOHN M. BANISTER, of the United States Army Medical Service, giving his observations during three years spent in the Philippines, says that scarlet fever, diphtheria, and yellow fever are unknown in these islands. He remarks: "As far as I have been able to learn not a single case of either of these diseases has ever occurred in the archipelago."

THE French Council of Ministers has decided that on the reopening of Parliament the Minister of Public Instruction and Fine Arts shall submit to the Chamber of Deputies a bill to provide a pension (pension nationale) for Madame Curie and her children.

THE President and Fellows of Harvard College and the Faculty of Medicine have issued invitations to the alumni to be present at the dedication ceremonies of the new buildings, which are to be held on Tuesday afternoon and Wednesday morning, September 25 and 26, 1906.

DR. THEODORE A. MCGRAW, president of the Detroit College of Medicine, was made the recipient of a silver loving cup, on the evening of May 11, from the alumni association of that college. The presentation took place at a reception of the alumni tendered by Dr. McGraw at his residence.

A WOMAN said to be 125 years old is now living in a Madrid hospital, in the service of Dr. H. Briz. She was born in Granada in 1780, her baptismal record being inscribed on the archives of a certain church, says an exchange. She entered the hospital thirteen years ago on account of a traumatism, which left her blind.

"AMERICAN PRACTICE OF SURGERY" is the title of a new treatise in eight volumes, announcement of the early publication of which is made by William Wood & Company. The work is edited by Drs. Joseph D. Bryant and Albert H. Buck, and the contributors are all representative surgeons of this country and Canada.

THE physicians of Milwaukee are, says an exchange, complying with the law passed last year, requiring a report to the health department of every accident which results in incapacitating the injured from pursuing his vocation for two weeks or longer. An average of 175 cases a month has been reported thus far this year.

DR. LAPPONI, the medical attendant of the pope, has, says an exchange, requested Dr. Boissarie, of Lourdes, France, to establish in the future the proper identification of persons cured at the famous Grotto of Lourdes, and to furnish depositions from physicians and witnesses who have seen the patients before their cure. By these means he expects to place the Lourdes cures on a more scientific basis.

AT a court in London the question recently came up whether corpulence was a disease or not, says a contemporary. A patent medicine company was being prosecuted for selling an obesity cure without the revenue stamps required on all proprietary remedies for

any "disease, ailment, or disorder." The magistrate ruled that obesity is a disorder, and that the defendants had committed a breach of the law.

THE German authorities, says an exchange, are discussing with favorable consideration the plan of sending a number of working people with mild forms of tuberculosis to German Southwest Africa instead of caring for them in sanatoria at home. The climatic conditions are said to be ideal, and by this plan they will be given a thorough test. The committee in charge of the temporary colony includes Kirschner and Katz, of Berlin.

MADAME CURIE writes to the *Aurore* to correct the statement which has appeared in several French newspapers that her illustrious husband had refused the decoration of the Legion of Honor because it had not been offered to his wife or to his father. She says that M. Curie refused the decoration because, like Herbert Spencer, he cared nothing for such distinctions, which he thought did far more harm than good. Madame Curie shares his opinion on this subject.

SOME observers, according to the *Clinical Review*, advocate the administration of diphtheria antitoxin in the early stage of scarlatina, holding that one dose of 2000 units leads to a speedy cure through aborting the disease. The antitoxin is also said to be effective in other anginas, notably tonsillitis and quinsy. The pain due to the congestion and the prostration caused by the toxins is quickly curtailed by this measure, which has the additional advantage of being without a single element of danger. Even very large quantities of serum may be used without the slightest depressing effects.

PROF. G. HOLZKNECHT, of Vienna, is one of the leading authorities and experts in Roetgen-ray work, and has long been the official Roentgen-ray medicolegal expert for the courts of Austria and director of the Roentgen-ray department of the Vienna General Hospital. A cable report, says an exchange, states that he was sued for $7500 damages on account of a serious *x*-ray burn resulting from his therapeutic application of the rays in 1902 in treatment of a cutaneous affection on the back of a male patient. There was no insinuation as to carelessness or neglect, but the court awarded the plaintiff the damages asked.

IN consequence of the feeling against Christian scientists aroused in England by the death of Major Whyte, which occurred while he was under the care of an alleged healer named Adcock, a member of the House of Commons on May 16 demanded that legislative meas-

ures be taken to prevent followers of the cult from carrying on their practices, with a view to protecting the lives of the ignorant and credulous, says the *Medical Record*. Home Secretary Gladstone replied that the law regarding the practice of medicine would probably be further elucidated in the course of the trial for manslaughter of the healer mentioned, and that no action could be taken until the trial was concluded.

An international committee has been formed to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes Von Mikulicz-Radecki, of Breslau, Germany, from the profession of the United States and Canada. The committee in appealing tells us that "an opportunity is afforded, not merely to testify of our sympathy and affection for Prof. Von Mikulicz-Radecki, but also to express our appreciation of Germany's great achievements in surgery." Contributions may be sent to any member of the committee, which is composed of the following surgeons: W. W. Keen, Philadelphia; W. S. Halsted, Baltimore; J. B. Murphy, Chicago; F. Kammerer, New York.

The new immigration bill before Congress fixes a higher standard for immigrants than has ever prevailed. The head tax is raised from $2 to $5; the educational test requires that every person above the age of sixteen years admitted to the United States shall be able to read some language; every adult male immigrant must have at least $25 at the time of landing, and every adult female must have at least $15, but heads of families may be admitted with their entire families provided they have $50. It places in the excluded class imbeciles, the weak-minded, and manual laborers of poor physique, and gives the Department of Commerce and Labor discretion to admit or exclude immigrants under sixteen years of age coming to this country alone.

The deaths of the following eminent foreign medical men are announced: Dr. Vincent Paulet, formerly professor of anatomy in the University of Montpellier; Dr. Karl Furstner, professor of mental diseases in the University of Strasburg; Dr. Max von Braun, formerly body physician to the King of Bavaria (he was the son of Prof. Jacob Braun); Dr. R. Thome, privat-docent of anatomy in the University of Strasburg; Dr. Ludwig Kleinwaechter, formerly professor of midwifery in the University of Innsbruck, who contributed a number of articles to Eulenberg's Real-Encyclopædie and to Hirsch and Gurlt's Biographical Dictionary of Medical Men; Dr. Alexander Haslund, the well-known professor of dermatology in Copenhagen, aged sixty-two years; Dr. V. Vleminckx, president of the Belgian Medical Academy.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Combined Operation of Appendectomy and Herniotomy.

F. Toret (*Annals of Surgery*, May, 1906) gives the following outline of this operation: An imaginary line is drawn from the anterior superior spine of the ilium to the umbilicus. A point on this line at a distance equal to one-quarter of its length from the iliac spine marks the beginning of the incision, which is carried down from here to the external inguinal ring. The aponeurosis of the external oblique is exposed throughout the length of the incision. This fascia is then incised in the direction of its fibers, as is customary in the gridiron operation for appendicitis, exposing the internal oblique muscle; but the incision is prolonged downward so as to terminate at the apex of the external inguinal ring. The aponeurosis of the external oblique is pared off from the underlying parts in the usual manner, on the outer side, exposing Poupart's ligament. Then the hernia operation is proceeded with up to the point where the sac is cut off. Here the hernia operation is intermitted and attention turned to the appendix. The fibers of the internal oblique and transversalis are separated bluntly in the usual manner, the peritoneum is opened, and the appendix removed; then the peritoneum, transversalis fascia, and muscles are closed again. The appendicitis operation is completed, except that the aponeurosis of the external oblique is still left open. Next the internal oblique and transversalis are sutured to Poupart's ligament, according to any of the approved methods, and finally the aponeurosis of the external oblique is sutured in the entire extent of its incision, so as to close both the appendicitis and the hernia operation. Lastly the skin is sutured.

Pyemia.

D. C. Peyton (*American Medicine*, March 17, 1906) reports an interesting case, in a boy of twelve, of what appeared to be pyemia following operation for appendicitis. It was thought that multiple metastatic abscesses existed in the liver. The autopsy revealed extensive adhesions between the intestines, while the left lobe of the liver and the stomach and spleen were all so firmly adherent in a general mass that in the effort to separate them the liver tissue was broken down. It was scarcely possible to find any place in the

abdominal cavity where adhesions did not exist. Several small pockets of pus were found irregularly deposited in the peritoneal cavity on the left side, walled in by the parietal peritoneum and the stomach, left lobe of the liver, and spleen. These adhesions were all remarkable for their exceeding firmness and extensiveness, and in many instances it was impossible to break them down without extensive destruction of tissue. At no time after the author first saw the patient would it have been possible to have accomplished anything or done any good by a free incision for the purpose of evacuating any of these pus cavities. The examination of the liver and spleen as well as other organs was negative, so that the autopsy, instead of revealing the existence of pyemia, proved the case to have been one rather of toxemia, and that these pockets or accumulations of pus were the result of nature's efforts to wall off this pus and protect the system against its absorption.

Symptoms of Rectal Affections.

K. Svelha (*Jahrbuch für Kinderheilkunde*, 1906) has observed several symptoms in rectal and anal disease which have been formerly overlooked. Amongst these are colicky pains, more especially pains in the legs simulating those of hip-joint disease. In the male he has found fissure of the anus to produce a discharge from the prostate resembling gonorrhea. He relieves the severe pain of fissure with cocaine suppositories, and finds that the spasm being also relieved the fissure heals. As an accessory he uses sitz baths three times a day and after stool, with local application of a salve, taking care to avoid hard stools.

The Surgical Treatment of Prostatic Hypertrophy.

A. Freudenberg (*Lancet*, April 28, 1906) in a paper on this subject says that there is no method of treatment which is applicable to all cases of prostatic hypertrophy, though in turn several operations have been acclaimed as the best method. There is no doubt that vasectomy is the least dangerous, but the results are very poor. On behalf of Bottini's operation it may be said that patients are more willing to undergo it, and, therefore, it can be often done before infection of the urinary passages has occurred. It causes less interference than prostatectomy, and can be carried out with local anesthesia. Moreover, sexual power is not lost, and there is no risk of a permanent urinary fistula. In favor of prostatectomy it may be said that it needs no special experience in urinary surgery or special instruments, and that there is less risk of recurrence than in Bottini's

operation. On the whole, Dr. Freudenberg considers that Bottini's operation is a milder operation than prostatectomy, and therefore more suited for weak and elderly patients; it should also be used in young patients when it is desirable not to interfere with the sexual power. It is also suited for small and middle-sized prostates. Where it is not possible to gain an idea as to the size of the prostate before the operation the suprapubic method is preferable.

Rickets the Result of Domestic Life.

Hansemann (*Berliner klin. Wochenschrift*, No. 9, 1906) finds that rickets occurs amongst children as a result of captivity, and is never found in animals or children running free. It always develops in monkeys kept in captivity under any conditions. He has investigated the native African and failed to find a single case. All the cases reported amongst the natives of the East Indies and Africa have proved to be anomalies of cartilage development and not rickets. This disease is unknown in Japan, but will probably appear if European methods are adopted there.

MEDICINE.

Fatigue.

F. S. Lee (*Journal of the American Medical Association*, May 19, 1906) reviews the known facts and the theories regarding the phenomena of fatigue, showing that although physiologists are generally in agreement as to the facts of muscle fatigue so far as demonstrated —and it is pretty certain that the peripheral nerve fibers are themselves exceedingly resistant—the question of the susceptibility of the nerve centers to fatigue is still considerably in dispute. In view of the recent results of Sherrington, Joteyke, Story, and others, Lee is inclined to think that the muscular system tires before the nerve centers, and that the latter are, like the peripheral nerves, resistant to fatigue. They also throw a certain measure of doubt, he says, on all supposed proofs of central fatigue. A physiologic explanation of the facts of mental fatigue is not possible, he says, in the present state of research. We cannot deny the facts of fatigue of psychic centers, but we can only speak with caution as to its being of central or peripheral origin. As yet we know too little in regard to the chemical changes attending fatigue.

Lee's own experiments make it seem probable that a loss of carbohydrate has considerable part in the production of muscular

fatigue, and he has also experimented with three metabolic products generally recognized as fatigue substances—sarcolactic acid, monopotassium phosphate, and carbon dioxide—and finds that these act as toxic depressors, especially on the muscular system, and that the sensation of fatigue is in large part the psychic manifestation of this depression. Other like fatigue substances will probably be discovered, and Weichardt's alleged discovery of a special fatigue toxin and antitoxin is mentioned in this connection as requiring confirmation. Little is known as to the production of fatigue substances in the central nervous system. The action of these substances, however, is not confined to the tissues in which they arise; excessive activity of one tissue can cause fatigue of others, and there are probably few physiologic functions that are not affected unfavorably by the prolonged and excessive activity of the muscular and nervous systems. The facts of acid intoxication are noticed as analogous to fatigue phenomena, so far as the latter are due to toxic substances.

In conclusion, Lee mentions as noteworthy the lack of serious endeavor, except by the nostrum venders, to provide specific antidotes for fatigue, considering its importance in our daily life. Alcohol, which in small amount seems to have a favorable action, is followed by unfavorable after-effects, and cannot be classed as a valuable antidote, and the same is true of other substances of similar physiologic properties. A true antidote must recognize the causes. Both scientific and unscientific experience have shown the real value of sugar as a partial restorer of working power, and alkalies, such as sodium bicarbonate, may not be without some value. These, however, are only in part efficacious, and only rest and sleep can be thoroughly relied on.

Dyspepsia of Puberty.

A. Hermand (*British Medical Journal*, April 21, 1906) has contributed an important essay on the disorders of digestion associated with puberty. The onset of menstruation may be the occasion for the appearance of more or less severe gastric derangement in girls. There may be no symptoms during the interval. Should previous dyspeptic symptoms have existed they are liable to aggravation at puberty. They may become so serious that the patient's disposition undergoes a complete change. There are loss of appetite, gastric colic, and vomiting; occasional symptoms of hyperchlorhydria accompanied by pain, appearing two or three hours after food, are present. The usual form of dyspepsia is the hyposthenic, characterized by pain, which only disappears at the end of the digestive process.

The symptoms may disappear on the termination of the period, but in some cases they persist, and chronic dyspepsia is established. The onset of puberty in boys may also be accompanied by symptoms of dyspepsia, especially in patients of neurotic disposition. Mild cases of the dyspepsia of puberty are characterized by a feeling of weight, distention, tenderness on pressure, regurgitation, and heartburn. Constipation is the rule, and there is a tendency to mucoenteritis. Some cases are more serious, especially those in which there is a neuroarthritic family history. They are severe, not only in the intensity of the symptoms, but in their intensity and liability to relapse. Instead of being transitory, the symptoms appear on the slightest provocation, such as fatigue; frequently they appear without apparent provocation. The patients are thin, feeble, listless, incapable of concentration, sleep badly, and present the typical phenomena of intense neurasthenia.

The treatment is difficult. The most minute attention must be paid to general hygiene and diet. Alkalies may be given a quarter of an hour before food. Sometimes hydrochloric acid (3 to 4 per 1000) may be taken with food. The writer points out the frequency of drug gastritis in these cases, for it is generally found that before a patient comes under medical treatment various digestive tonics have been liberally administered by anxious parents.

The Etiology, Prognosis, and Treatment of General Paresis.

Joseph Collins (*Medical Record*, Jan. 27, 1906) illustrates his paper by observations made on fifty private and fifty hospital cases of general paresis. The disease is due to syphilization and civilization, and it is with the first of these that physicians have to do. Important factors in the prophylaxis are the education of young men to premarital continence, and the thorough treatment of syphilis when it occurs. If general paresis can be detected in what Dana has called the preparetic stage, there is a chance of arresting it. The type of the disease that is less influenced by any kind of treatment is that form that begins insidiously, in which there is no symptom that stands out conspicuously to attract attention, and in which the patient often keeps his occupation until a comparatively advanced stage of the disease; and the prognosis is worse in the young.

The author details the encouraging results he has obtained in apparently arresting the disease in three cases of general paresis by intensive mercurialization, but he states that this plan has a chance

of success only if the diagnosis is made very early. He therefore urges that general practitioners endeavor to make the diagnosis early. To this effect the diagnosis of neurasthenia should never be made by the general practitioner until after a routine physical examination has been made of the patient. Such examination will be productive of good in two directions: in the first place the diagnosis of neurasthenia will be made less often, and in the second place the general paresis will occasionally be recognized in its incipiency. The slightest manifestation of loss of the pupilary light phenomenon, premonitory display of labial and facial tremor, unattributable lingual tremor, disorder of the tendon phenomenon, particularly of the lower extremities, occurring in a patient who has some one, any, or all of the symptoms of neurasthenia, should be immediately put in the category of suspected cases of general paresis, and if the suspicion is a strong one, should also be put upon vigorous antisyphilitic treatment.

Acute Articular Rheumatism.

C. W. Hargens (*Journal of the American Medical Association*, March 3, 1906) remarks on the confusion in the common use of the term rheumatism, which he defines as an acute, febrile, noncontagious affection, characterized by a nomadic multiple arthritis, profuse sweating, and proneness to endocardial complications. He is not inclined to accept the microbic theory of the disease, which he considers to be, in at least the great majority of cases, autotoxic, due to toxic invasion, the infection being secondary to the conditions wrought by the disturbed metabolism and made possible by them. Realizing this early treatment, he says, will promptly relieve the patient and will usually prevent the secondary infection. His treatment consists in complete rest between dry blankets in a warm, sunshiny room, thorough cleansing of the alimentary canal before any food is allowed, then a carefully regulated diet, limiting the food taken and excluding all proteid or xanthin-forming foods, keeping up elimination vigorously by way of the skin and bowels with baths, laxatives, etc., and flooding the system by the internal administration of alkaline waters and keeping the urine alkaline or neutral by this means. For drug treatment he would give the salicylates, not over three drachms daily, in doses of from ten to fifteen grains. He finds that with hot baths and free elimination large doses of depressing drugs are well borne, but he advises getting rid of the salicylate as soon as possible and substituting the syrup of iodide of iron and Fowler's solution, as these patients become weak and often

markedly anemic. Also, he says, one must not adhere too long to the non-proteid diet. Locally he uses hot fomentations to the affected joints, or keeps them wrapped in cotton-batting or wool and applies a splint. Unless the weather is extremely favorable he would keep the patient in bed at least a week after the temperature becomes normal, and in all cases he keeps careful watch against relapse.

Experimental Method in Sanitary Science and Sanitary Administration.

Wm. Sedgwick (*American Medicine*, March 10, 1906) says in sanitation experience must largely take the place of experiment. He refers to his own studies on an epidemic of typhoid fever, and remarks that comparatively few physicians or sanitarians are in a position to conduct artificial experiments, but almost any wide-awake observer, whether he be physician, physiologist, sanitarian, or engineer, may, if he will, find going on all about him natural experiments, the conditions of which may often be learned with great accuracy, even after the experiment is completed, and which may yield conclusions quite as capable of verification as are those of experiments made in the laboratory. This is a matter of encouragement, especially for younger workers. He pleads for better material on boards of health, claiming that it is time we should cease experimenting with something better than spoilsmen. Two often a hack politician or two, a second-rate doctor or two, and one or more vain or place-seeking nobodies—useless, but not harmless—make up our local boards of health; and as no stream can rise higher than its source, the services of such boards are disgracefully small in quantity and poor in quality. The present plan is a failure experimentally demonstrated. Let us continue to invoke the experimental method in which we believe, and abandoning our present customs, which have been experimentally proved, for the thousandth time, to be hopeless, try instead something more promising.

On Suppuration in the Pouch of Douglas.

E. Morian (*British Gynecological Journal*, February, 1906) has a personal experience of 25 cases of abscess in the pouch of Douglas —15 in males and 10 in females. In a very interesting article he discusses their etiology, and advocates their evacuation into the rectum as recommended by Rotter in 1900, by means of a trocar about 17 centimeters in length. He considers this preferable to the method recommended by Howard Kelly, in his recent work on the

vermiform appendix, as narcosis is not necessary, nor the dilatation of the sphincter, and he finds cases do well without washing out the cavity or inserting a drain. He insists on the superiority of puncture from the rectum, over Hochenegg's parasacral opening, and over perineal operation. Opening such abscesses from the vaginal vault exposes the uterus to infection, and in young people is out of place. His general conclusions are: suppuration in the pouch of Douglas is generally a symptom of diffuse peritonitis, and most commonly a consequence of appendicitis. As a rule, it occurs because the serous exudate from the inflamed appendix, with the contained microbes, flows down into the pouch of Douglas. It is apt to come on toward the end of the first week after the onset of the appendicitis. An abscess in Douglas's pouch has little effect on the pulse or temperature, but may be recognized by symptoms of local pressure and inflammation in the rectum, before it has time to rise above the symphysis. An absolute diagnosis can only be made by exploratory puncture. It is desirable that such an abscess should be emptied as soon as possible, and the best way of doing this is by perforating the anterior wall of the rectum in Rotter's way, which is both simple and sure. The perineal and parasacral methods of incision should be reserved for suppuration of the pelvis itself or its connective tissue.

The Readjustment of Education and Research in Hygiene and Sanitation.

W. T. Sedgwick (*American Medicine*, Feb. 24, 1906) urges that a sharp separation be made between sanitary and hygienic work in research and education, claiming that such a separation exists already in fact, and that its recognition would promote the interests of both branches of general hygiene. He would have sanitation mean chiefly the care of the environment (streets, water, milk supplies, sewerage, etc.), and hygiene chiefly the care of persons or groups of persons (feeding, vaccination, personal hygiene, etc.). The latter would then belong largely to medical men or physiologists, the former to sanitary biologists, chemists, and engineers. He laments the small attention paid to hygiene and sanitation, alike in medical schools and in schools of engineering, and looks for a remedy partly in the better definition and separation of these subjects, and partly in the establishment of permanent, well-paid positions for trained men in the public health service, which should at the same time be made more general and less local. He pays his respects to political boards of health as follows: Politics must also be wholly eliminated from our boards of health, both State and municipal.

There is no republican method of vaccination, no democratic plan of street cleaning. And places on boards of health must not be used as rewards of political activity. The time — if it ever existed — has gone by when a good board of health can be made up of a political doctor, a political saloon-keeper, and a political nobody: for no well-trained and self-respecting expert in hygiene or sanitation can or will remain in the dubious and uncertain service of weak, incompetent, or shifty characters.

A Factor in Perineal Lacerations.

Wm. H. Shipps (*Medical Record*, Feb. 17, 1906) calls attention to the unhappy results of the violent and uncontrolled expulsive efforts of the mother just prior to the birth of the child. He clearly explains why this factor plays an important part in the causation of perineal rupture. The patient is worn out with the exertion which she has been making for hours, and which she believes to have been futile. She is anxious to see the end of her sufferings, and, listening to the advice of her friends, she uses all her reserve force and strains with all the energy of which she is possessed. The writer believes that too short a time is given as a rule for the physiological softening and stretching of the tissues. In his practice he encourages the woman in labor, assuring her that though the pains she is suffering are apparently accomplishing little, they are in fact surely preparing the way for the birth of the child. He, moreover, warns her of the approach of the period just prior to the delivery, when all bearing-down efforts must cease. Little difficulty in general is experienced in securing the necessary coöperation of the patient. The integrity of the perineum remains intact in proportion as control over the last expulsive effort of the patient is secured. The writer operates in in every case of laceration except the most superficial.

The Early Recognition of Tuberculosis.

J. H. Elliott (*American Medicine*, March 24, 1906) makes a plea for early diagnosis of pulmonary tuberculosis. Frequently it occurs that in spite of obvious physical signs the physician will not make a diagnosis of the disease because no bacilli are to be found in the sputum. The importance of early diagnosis lies in the prognosis, for of incipient cases placed under treatment Dr. Elliott's experience shows that 75 per cent may recover, while of far-advanced cases less than one per cent. The symptomatology of early tuberculosis is discussed. In addition to careful examination of the patient, continued observation is often necessary to establish a diagnosis when

bacilli are not present in sputum. The fluoroscope may be of assistance, and the tuberculin test may be necessary. The results of examination should all be carefully recorded. The unassisted memory is often at fault, and unless a thorough examination is properly recorded its greatest value is lost—that is, comparison with subsequent findings.

Nose and Throat Diseases from a Constitutional Standpoint.

J. L. Harkness (*American Medicine*, March 24, 1906) in discussing nose and throat diseases from a constitutional standpoint points out the intimate relation which exists between these organs and other organs of the body, as, for instance, laryngitis and pharyngitis of rheumatic or lithemic origin. He also notes the relation between varicose veins of the leg and hypertrophied tonsils, and the effect of adenoids, which cause gastric disturbance, and, *vice versa*, inanition in children, etc. He calls attention to the inflammatory conditions of the sinus (with consequent systemic effects) caused by a deflected septum, and shows the close relation existing between nasal conditions and the genitalia both in normal physiologic conditions and in disease.

Bacillus Chlorhydrici.

E. Palier (*American Medicine*, Feb. 24, 1906) describes in detail a bacillus under this name which he isolated from the human stomach and cultivated. It may be found in hyperchlorhydria and in chlorhydria, but not in hypochlorhydria, and hence its name. It is a small, slender, motile, Gram-negative bacillus, and is aerobic. Its isolation is very difficult. B. chlorhydrici and yeast are the two germs usually found in hyperchlorhydria and in chlorhydria when the HCl is above 0.1 per cent, and they help the digestion of proteids and fats. Under abnormal conditions, when there is an abrasion or injury of the mucous membrane of the stomach, these two microorganisms may be the cause of round ulcer of the stomach, as they cause such an ulcer when rubbed into the root of the tail of a mouse.

Arteriosclerosis After Traumatism.

Goldzieher (*Berliner klin. Wochenschrift*, 1906) reports the case of a man who was struck on the head and rendered unconscious by a brick. Three weeks later he came under notice on account of a severe occipital headache. When first seen his pulse was 120 per

minute, his arteries soft and tense, his heart sound clear and unaccentuated. At the last examination his pulse was 136 to 144, the radial, brachial, and temporal arteries were tortuous and hard, and there was a marked systolic aortic murmur. There was no history of syphilis.

Water as an Obstacle to Skiagraphy.

Lichtenstein (*Münchener med. Wochenschrift*, No. 10) exhibited a number of skiagrams and cited cases in which the presence of fluids had obscured the radiographic picture. He states that it is not the composition of the kidney stone but the presence or absence of water that aids in obtaining a successful picture of the stone. The presence of the amniotic fluid is the reason that pictures of the pregnant uterus are so unsatisfactory. Stones in the bile-ducts present a clearer picture than those in the gall-bladder, on account of the quantity of bile present in the latter position.

THERAPEUTICS.

The Treatment of Lumbago.

R. O. Semmes (*New York Medical Journal*, May 19, 1906) says: "In the acuteness of the attack first put the patient to bed, give a tablespoonful of Epsom salts in a glass of water, and apply faradic electricity to the whole of the posterior lumbar region for thirty minutes, using the current from a long fine wire and applying it as strong as the patient will bear. After the electricity has been discontinued, apply hot wet packs to the entire posterior surface of the abdomen; continue these packs for several hours. Only in the most extreme cases do I give an opiate, but when it becomes necessary a hypodermic injection of morphine sulphate ¼ grain, with atropine sulphate 1-150 grain, will, in conjunction with the other measures mentioned, suffice to afford relief. When the acuteness of the attack is over, strap the posterior lumbar region with rubber adhesive plaster; use the straps one and one-half inch wide; apply by commencing with the first strap at the lower margin of the twelfth rib of either side, and carry the plaster obliquely across the back to the crest of the ilium of the opposite side. After using three such straps on both sides of the back, add two straps on each side of the oblique plaster as follows: Commencing at the lower margin of the eleventh rib, carry the straps perpendicularly to the crest of the ilium of the same side, the ends of the plaster to go a little below the ends of the

oblique straps. The bowels must be kept open by the use of an aperient. The patient should therefore drink freely of pure water; if the kidneys are sluggish in acting, give a mild diuretic, as potassium acetate, 10 to 20 grains three times a day. I always give this in a glassful of water. Allow a mixed diet, carefully regulated as to the amount. In every case study the digestive powers and diet accordingly. When the case is or becomes chronic, attention to the emunctories will be necessary as the first therapeutical measure; the same plan can be adopted here as is used in the treatment of the acute and subacute stages, the addition of static breeze to the back, and general galvanism will entirely relieve the patient. In every case of this kind I advise the patient to wear woolen underwear in the summer as well as in the winter; the light wool is as well borne in the hot weather as the heavy is in the cold. All exposure to inclement weather is to be avoided; draughts of air and overcrowded rooms as well as overheated apartments should be shunned. A change of scene, climate, and environment is most beneficial."

The Renaissance of Therapeutics.

R. C. Cabot (*Journal of the American Medical Association*, June 2, 1906) remarks that the prominence gained by surgery from its brilliant and beneficent successes is being moderated to some extent by lessening the anxiety of surgeons for operation and by the result of hygienic treatment of osseous and glandular tuberculosis. As surgery settles into its place a new wave of therapeutic activity is arising along other lines. The treatment of tuberculosis, which was formerly regarded as very nearly hopeless, now shows what may be called an aggressive spirit in therapeutics, the results of which are remarkable. In the cold, damp, changeable climate of Boston not merely the ideal patients who have an incipient lesion, good courage and backbone, a country house, and real intelligence are being cured, but some of the stupid, discouraged slum cases that were formerly abandoned as (under the circumstances) hopeless. Another example of this aggressive spirit is shown by the attitude of the school physician, who now insists on general physical examination of every child in school at least once a year, whether it complains or not. The campaign against tuberculosis is now interesting the public as well as the profession. The increasing prevalence of therapeutics is another indication of advance. The physician also becomes aware of the importance of psychic factors in the production of disease. It is going to be recognized as a legitimate and, indeed, an essential part of therapeutics to seek for the relief of any

cause that is producing disease. This necessitates the investigation of social, industrial, and family conditions.

The recognition of social and psychic factors as causes of disease and the measurably successful effort to teach and to modify these causes is one of the most striking marks of the present rebirth of therapeutics. In the newer psychic and sociologic fields which medicine has begun to invade, women will find a large field of usefulness. The effective application of all therapeutics (if we except surgery), Cabot states, is women's work. These changes in therapeutics are accompanied by the beginning of the end of many evils, especially the false mystery that has often encompassed the doctor and the conception of drugs as the alpha and omega of therapeutics. He concludes as follows: "(1) Therapeutics has become, within the past few years, very noticeably more effective. (2) This increased effectiveness is the result of (*a*) the aggressive spirit as exemplified by the work of the New York Board of Health in school hygiene and school inspection; (*b*) the greater part now being taken by the laity in medicinal work, both by intelligent coöperation and by financial support; (*c*) our greater acquaintance with physical therapeutics, especially with the details on which their successful application depends; (*d*) the rise of scientific mind cure and of social work, marking a recognition of the psychical and of the social elements in all disease; (*e*) a wider utilization of the unique talents of women in the field of therapeutics. (3) With the rise of the type of therapeutics here described we are now witnessing a limitation of the sphere both of surgical therapeutics and of drug therapeutics. The latter limitation will do much to undermine the superstitions on which the 'patent medicine' habit rests."

A More Liberal Diet in Typhoid Fever.

Thos. A. Clayton (*Medical Record*, March 17, 1906) states that it has been proved experimentally that the digestive and absorptive powers during typhoid fever fall off only five to ten per cent, so that impaired digestion is not sufficient argument in favor of the exclusive milk diet. The present trend of thought is toward the belief that the majority of diseases being due to specific poisons, recovery depends upon either the exhaustion of that poison or the development of an antibody of some sort that renders it innocuous. In order that he may withstand the ravages of the disease until the time of recovery it is necessary to keep the patient in the best possible condition.

The writer emphasizes the following points in the selection of a

diet for typhoid fever patients: It must be highly nutritious, easily digested, innocuous, and palatable. The food must be sufficiently nutritious to maintain as far as possible the bodily equilibrium. The writer's treatment of a case of typhoid fever, no matter what day of the disease it may come under his care, is as follows: The regulation six ounces of milk is given every two hours, night and day, while the patient is awake. In place of milk, in order to vary the monotony for those who can take milk, and as a substitute for those who cannot, animal broths are given. After the subsidence of the more acute symptoms the patient is asked if he is hungry, and if he replies in the affirmative a soft-boiled or poached egg is allowed, and if well borne the number is gradually increased to three or more a day. Jelly or blanc mange, custard, soft toast, the soft part of baked apple, and rice which has been boiled four hours are the next addition. After this scraped beef or chop, very finely divided chicken, and baked potato are tried. The writer does not advocate so full a diet in every case, for each patient must be carefully studied as an individual. He believes that most of the foods mentioned are quite as digestible, far more palatable, and rather less likely to cause perforation or hemorrhage by their local action or gas production than milk. The writer appends a table of twenty-six cases. These patients all recovered. He adds that the advocates of the more liberal diet claim that the patient is more comfortable, the attack is slightly shortened, convalescence is more prompt, and relapse, hemorrhage, and perforation are not more frequent.

Serum Treatment of Exophthalmic Goitre.

The clinical tests of the serum prepared by Beebe, as described in his article, and as made by J. Rogers, of New York, are reported in the *Journal of the American Medical Association* of February 17, 1906. In ten cases there were three apparently perfect cures, three other patients were rescued from a critical condition, while the others were more or less improved. The best results with the smallest dose were obtained from the serum first prepared with the fresh precipitates of nucleoproteids and thyreoglobulin, those obtained from the later dried precipitates being less effective. He suggests that the serum contains two active agents — a cytotoxin having a late and cumulative effect in suppressing the action of the thyroid secreting cells, and an antitoxin nullifying the action of the excessive thyreoglobulin. The clinical facts justify the supposition that the fresh serum may stop the active poisoning, and a little later inhibit the activity of the gland, and thus in some way break a

vicious circle and lead to the resumption of the normal functions. He remarks on the difficulties of the preparation of the serum and its possible dangers. He does not believe that every patient can be thus treated, as the individual reactions vary. Certain patients without exophthalmos, but with cystic or adenomatous thyroid, complaining chiefly of digestive disturbances and pain, together with dyspnea, weakness, soft, feeble pulse, constant intermittent tachycardia, and general nervousness, seem particularly refractory. In bad chronic cases the patients, of course, cannot be expected to recover as quickly as in those that are milder and of less duration. Any mistake in making up the serum may render it useless or dangerous. A very skilful chemist used to biologic work is essential. In conclusion Rogers remarks: "If for a cure of exophthalmic goitre it becomes necessary for some poor sufferer from the disease to die or to be operated on to obtain the pathologic thyroids of exophthalmic goitre in order that others may be saved, it would, indeed, be a scientifically grim romance."

The Therapeutic Value of Warm Moist Air in the Treatment of Diseases of Children.

T. W. Kitmer (*Medical Record*, Jan. 27, 1906) advocates the use of warm moist air in the treatment of children suffering from croup, bronchitis, asthma, pneumonia, and diphtheria. The moist air may be introduced into the crib or bed of a child under an elevated sheet or blanket, by means of an ordinary croup kettle, or administered by inhalation. After outlining the diseases in which moist air is used as a therapeutic agent, he gives some conditions under which hot dry air may be efficacious. A child suffering from nephritis is placed on a rubber sheet, the white one laid over it, and the covers elevated only sufficiently to admit the heat, which is applied by one of several methods suggested by the writer. He emphasizes its value in the treatment of all rheumatic affections, and has used it with success in sprains.

The Ultimate Localization of Mercury in the Body.

Z. Conte and A. Zucol (*British Medical Journal*, May 5, 1906) have carried out a series of researches with regard to the ultimate destination of mercury whether given hypodermically or by the mouth. They conclude that in whatever mode mercury is administered, it is carried to and deposited in the various organs by means of white corpuscles of the blood. The liver, the intestines, and the kidneys receive the chief bulk of the mercury in ordinary doses. Elimi-

nation and isolation from more vital organs are thereby insured. In other organs—for example, salivary glands, pancreas, thyroid, thymus, testes, etc.—the drug is not deposited constantly, but only after excessive dosage, when the previously mentioned organs have become saturated. When mercury is found in the saliva of the mouth and not in the saliva drawn directly from Steno's duct, the explanation is that the mercury comes from the lungs (from the leucocytes). In every case the drug is situated in the nucleus of the cell by preference rather than in the body, which seems to support the views of those who believe that mercury exists in the body as a nucleinate. The chief paths of elimination are the intestine, the kidneys, and the lungs, the saliva having only a secondary importance. Experiments on the localization of mercury in relation to the fetus when given to the pregnant mother are reserved for a future occasion.

Serum Therapy of Croupous Pneumonia.

Louter (*Wiener klin. Med.*, No. 11, 1906) treated fourteen cases of croupous pneumonia with Romer's pneumococcus serum. Nine of these cases were due to infection with pure pneumococci, the other five were due to mixed infection. The serum had no influence on these latter cases at all. Of the other nine cases, seven were afebrile after ten to fifteen hours after the first injection, and two after the second. The subjective symptoms were improved by the use of the serum.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

The "Hyperkeratotic" Gonorrheal Eruptions.

V. Roth (*British Journal of Dermatology*, April, 1906) records a case under his own charge, and then proceeds to compare it with other recorded instances of gonorrheal eruptions. The patient, a man aged thirty-five years, was admitted into the hospital on December 25, 1904, suffering from gonorrhea, complicated by an inflammation of the tendon sheaths of the extensors of the right foot. He had contracted gonorrhea once before, in 1901, and had recovered from this attack in the course of a few weeks and without complications. On his admission into the hospital the right foot was swollen and painful. A fine crepitation could be felt when the toes were

actively moved. Shortly after admission small nodules began to appear on the upper surface of the great toe, just behind the nail. The nodules in this position were five in number, about the size of a barleycorn, brownish-red in color, and without any red halo surrounding them. They were nearly transparent, giving the impression of fluid contents, yet hard to the touch. It was possible to tear off a horny cover, leaving a red, succulent surface, which, however, did not bleed. Similar nodules appeared on the other toes of this foot, and also on the left foot as well. The nodules appeared to develop rapidly and to have a brief first stage, in which, after removal of the cover, a slimy, grayish-white substance, composed entirely of softened horn-cells, was extruded. Gonococci were found in the urethral discharge, but none in the contents of the nodules. On January 4 it was noted that from ten to fifteen fresh nodules had appeared, and that the edematous swelling of the right foot had decreased. On January 10 a florin-sized cluster of petechiæ appeared over the right internal malleolus, and on January 20 a nodule similar to those on the feet appeared on the outer side of the left leg above the malleolus. The nodules gradually disappeared as the horny covers were thrown off, and the patient left the hospital on February 11 well. The author proceeds to make some critical observations concerning his case, and to compare it with cases recorded by others.

GYNECOLOGY AND OBSTETRICS.

Puerperal Infection.

H. J. Boldt (*New York Medical Journal*, May 19, 1906) in discussing the prognosis of puerperal fever as determined from examination of the blood draws the following conclusions: (1) Favorable prognosis: If there is no deterioration of the neutrophile blood picture or only a slight one, the presence of eosinophile cells. (2) Unfavorable prognosis: Leucocytosis of more than 50,000; serious deterioration of the neutrophile blood picture, absence of eosinophile cells, decided diminution of the number of red blood-corpuscles. (3) An improvement is shown by betterment of the neutrophile blood picture and the appearance or an increase of the eosinophile cells. (4) Retrogression is manifested by a deterioration of the neutrophile blood picture, diminution or disappearance of the eosinophile cells. (5) Prognostically, absolutely uncertain: Appearance of poikilocytosis, combined with polychromatia and nucleation of the red blood cells.

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ORIGINAL CONTRIBUTIONS.

PULMONARY TUBERCULOSIS.

BY D. D. GROUT, M.D., WATERBURY, VERMONT.

From time immemorial pulmonary consumption has been the curse of the human race and the *bête noire* of the medical profession. Its pathology has gone through various evolutionary stages, and propagandists of each stage have vied with each other in relegating the doctrines and promulgations of their predecessors to eternal oblivion.

Its treatment can hardly be said to have been evolutionary, for the term evolution indicates a gradual unfolding of development from a plan. Neither can much of its treatment be said to have been scientific.

Many beautiful theories regarding its treatment have been evolved from wrong premises, only to be discarded for others equally beautiful but quite as fallacious.

Nearly every drug in the whole materia medica has been called into use in its treatment by enthusiasts who seemed to believe that they had discovered the *elixir vitæ*. Chemistry and the animal kingdom have contributed each its share. Climatology has been unsuccessfully studied; altitudes have been taken; and patients have endured hardships and deprivations and even death in their endeavors to reach the one that happened to be the passing fad of their medical advisers or of solicitous friends. The low, moist, and balmy atmosphere of Florida has been tried about equally with that of the high, dry, and rigorous air of the Rockies, and with about equal success.

So-called specifics have been discovered and heralded *ad nauseam* and applied internally, externally, and eternally, much to the discredit of the medical profession and to the detriment of their patients.

A little more than a score of years ago a discovery was made that we all believe has started us on the road that leads to a correct and scientific understanding of this dread disease. For twenty-one years we have been studying the tubercle bacillus, and year by year we have learned its habits and various modes of entering the human system, consuming and extinguishing the life of that which was made in God's own image.

No problem before us at present compares in gravity and magnitude, not only to this generation, but to those who come after us, with the wisest disposal of the consumptive. First, how can we best care for the patient? Second, how can we prevent the spread of the disease? How can we best care for the consumptive? To place him in the most favorable condition for an arrest or cure and at the same time prevent a spread of infection allows of much latitude for debate, but at best narrows down to a few cold facts: Education of the laity, suitable legislation, and the hearty coöperation of each medical man in the land.

Tuberculosis annually causes more deaths than any two diseases combined. It is an insidious disease, unlike acute infectious troubles, and the public has learned to look upon consumption as something that has always been with us and accepts the situation as a matter that cannot be prevented.

How to educate the masses out of this state of lethargy is a question that should be begun under the head of hygiene in our public schools. Too much attention cannot be given to modern sanitary living quarters with room for an abundance of pure, fresh air and sunshine; at the same time devitalized air should be taught as one of the potent causes of tuberculosis.

I know of no better way to reach the masses on this or any other subject of such vital importance than starting at the fountain's head with the little ones, who in half a generation will have the custodianship of all nations.

Suitable legislation can accomplish much, legal enactments looking to the control of the various means of infection; the enforcement of sanitary regulations, and the assistance in a financial way, in the erection and equipment of sanatoria for the care, treatment, and education of the indigent tubercular. And here let me say that while I believe that properly located and conducted sanatoria can do very much toward the restoration to health of the consumptive, and that it is practically the only means we have at our command to control the disease among the

masses, yet I am of the opinion that the chief good that accrues from these institutions is along educational lines. It is self-evident that their work must be restorative in order to become educational. If there never was a case completely cured in these sanatoria, yet their work would be beneficent, for in the incipient cases the benefit derived is so early apparent, and the victim becomes so thoroughly conscious of the improvement that takes place, that he invariably becomes a convert to the doctrine of pure air and wholesome food, and has his mind disabused of the fetish of "cold drafts," "night air," and "taking cold." Consequently he goes out a missionary among the heathen and benighted, who have for generations vied with each other in their efforts to make their homes as unsanitary as possible by excluding fresh air and sunshine and by filling their houses with furniture, carpets, and draperies that serve no earthly purpose but as harborers of dust, filth, and infection.

We must acknowledge that the fear of contagion or infection must be implanted in the minds of a community before a moral support is given to a health board to stamp out a disease.

It is when boards of health have good laws to prevent the spread of tuberculosis, and the boards of health are assisted by the medical profession, upheld by a people who have been taught the nature of tuberculosis with its various modes of infection, etc., and the means by which it can be contracted, that we expect to see the disease practically abolished from mortuary statistics.

The public mind of America, as well as that of Europe, is becoming aroused to the ravages of tuberculosis, and at the same time to its prevention and curability.

Much unwise legislation has been proposed from erratic, impulsive sources. Some States have introduced bills to prevent the introduction of the tubercular; even a few villages have passed ordinances prohibiting the tubercular from entering their gates. Such legislation is worthless, because it is impracticable and will ever remain dead upon the statute books.

Notwithstanding some mistakes have been made along this line, much good has already been accomplished. The civilized world is enlightened as to the great danger that lurks in the consumptive's sputum, and measures have been taken looking to the prevention of its dissemination. States and municipalities are discussing on every hand the disposition of their consumptive poor; in many instances homes and sanatoria have been established exclusively for the tubercular. Several States have already

made contributions and established State institutions for consumptives; other States are formulating plans along this same line. It is entirely logical and but reasonable to expect every city and State in the Union to adopt some practical means for the care of the consumptive poor and to prevent them from infecting others.

Permit me here to quote Dr. Beverly Robinson, of New York, who in a recent article says: "To me the idea of sanatoria for the poor brings joy and gladness, because I see in it a prospect of cure for many; prospect of consolation for many more."

To be sure, it will, perhaps, be a long while before we may legitimately hope, even with large and numerous public sanatorium buildings, to meet all requirements of the needy consumptive. But with their existence we shall have accomplished a great and noble, though necessarily limited, work, and we shall be able effectively to educate a large and increasing number of sufferers; so that when they return to their homes, stationary, improved, or cured, they will know better how to care for themselves and how to protect others.

As to private sanatoria, especially for the favored ones, and with one or two notable exceptions, I frankly confess I do not feel that the return of health and strength to relatively few patients justifies wholly the outlay of money, labor, and notoriety in behalf of these institutions. I may be misinformed or in error, but in many ways I believe such patients, with their own physicians and with large, sunny, well-ventilated rooms, appropriate surroundings, good food, care and discipline, in a well-selected location in the country, would enjoy advantages not fairly counterbalanced by excessive *doing* and *over-minute* regulations (often calculated to do more harm than good) of private sanatoria.

What shall we say of our home treatment? To the vast number in our midst at present it is the only available treatment. Even if we could persuade very many among the poor to leave their homes and go elsewhere, there is no institution yet open to receive them. Fortunately, the day of specifics is passing for all honest and intelligent practitioners.

It is useless for enthusiastic and overzealous men to laud and magnify (after very moderate or wholly insufficient experience and cases) this or that drug, this or that preparation, and dreams of cure. Hygiene in its broadest, best sense is, after all, our main reliance, and statistics based upon other means, no matter how

favorably interpreted by their warm advocates, meet with little cordial response from those who have learned by long experience to become properly skeptical.

What we want, what we insist upon for our poor, is better ventilation, more and better air, more sunlight, improved plumbing, greater cleanliness in their homes. To these essentials we add good food, properly prepared and served, a pure and plentiful supply of milk and water. Much of all this means of necessity, therefore, improved tenement houses, and under no possible pretext to allow any unjust, iniquitous laws to be passed which will interfere with our ideals or oblige us to take a step backward in our march of progress and greater civilization.

How shall we accomplish this? By education! And we should begin with the physicians. The ideal physician is something more than an expert diagnostician and therapeutist. He should also be an expert sanitarian. He should not only have convictions, but the courage to communicate those convictions, and in such a manner as to leave no possible doubt in the minds of his patients and their attendants regarding the correctness of his views.

Next in order should be the education of the people, and this can be done in the ways before suggested. When this has been accomplished there will be no occasion for sanatoria, except for the very poor and for the homeless.

Doubtless this idea is too Utopian to be of very much immediate benefit. And in the meantime it seems almost obligatory for States and municipalities to make suitable appropriations for the erection, equipment, and maintenance of a sufficient number of sanatoria for the accommodation of those who from force of circumstances or inclination may wish to avail themselves of the benefits that may be derived from a sojourn therein: thus a twofold object will be accomplished—restoration to health and usefulness of a large number, and the education of the people along these lines, aided as it can be in no other way.

THE RATIONALE OF CONSTIPATION.

BY C. C. MAPES, LOUISVILLE, KENTUCKY.

If explanation or apology be demanded for attempting to add to the already voluminous literature concerning constipation (or obstipation), the reminder seems only necessary that it is directly or indirectly connected with a large percentage of the vexatious ills to which the genus homo is prone; indeed, that it is oftentimes

one of the most obstinate and persistent symptoms accompanying numerous disorders which the modern disciple of Esculapius with an average clientele is called upon to treat.

At the outset the fact must not be overlooked that constipation is not entitled to the distinction of being denominated a disease *sui generis;* it is an expression of some underlying condition, a concomitant symptom, the origin of which may be local or general, depending upon the nature of the disorder by which it is induced, or of which it is but a component part.

One of the well-understood dicta upon which good health depends is that there shall be at least one daily alvine evacuation; but this, like most other maxims, is not inflexible, and average health is not inconsistent with wide departures from the ordinary rule. There are many strange exceptions—*e.g.,* one individual may have but a single defecation per week, while another may have two or more a day, yet each may enjoy the same degree of general health. In the former instance constipation cannot be said to exist, since the infrequency of defecation is habitual or idiosyncratic.

Jackson[1] says costiveness is totally incompatible with health; poisons that damage the whole system are absorbed, with consequent sickness; the tone and function of the rectum is lost, and habitual constipation is the result, followed by troublesome hemorrhoids, painful fissures, seminal losses, and prostatic and vesicular disease in the male, menstrual irregularity and ovarian and uterine disease in the female. There is but one remedy: ceaseless vigilance and never-ending punctilious daily morning evacuation.

As already intimated the primary and essential productive cause of constipation in a given case may be local or general, or it may partake of both. Of local causes the most prominent are: (1) Lesions which narrow the lumen of the large intestine; (2) scybala or concretions in the cecum, sigmoid flexure, or rectum; (3) pressure on the rectum from a neoplasm, a gravid or displaced uterus, sometimes in the male by a greatly enlarged prostate; (4) enfeebled abdominal muscular action the result of repeated pregnancy, obesity, or old age; (5) hemorrhoids or anal fissure; (6) feeble contraction of the intestinal muscular fibers causing inefficient peristalsis; (7) paralysis of the nerve supply to the intestinal walls; (8) painful affections of the abdominal and pelvic viscera, etc., etc.

[1]The Medical Age.

The general causes may be even more numerous and diversified: (1) Sluggishness of function; (2) sedentary habits; (3) great muscular activity; (4) mental application, excessive or prolonged; (5) continued use of aperients and enemata; (6) disregard or neglect of the calls of nature, or too great haste in completing the act of defecation; (7) prolonged and irregular hours of sleep; (8) excessive use of alcohol or opiates; (9) diseases of the heart, liver, and stomach, diabetes, prolonged lactation, the various febrile disorders, diaphoresis; (10) lastly, but perhaps most important, errors of diet and lack of requisite physical exercise.

In speculating upon the causes of constipation the *Medical Times* remarks that there is lack of tone in the muscular coat of the intestines, causing a decrease in peristalsis, usually due to imperfect regional innervation, deficient secretion, or excessive absorption; that people leading sedentary lives are predisposed to constipation. The symptoms (excepting in cases due to organic disease) are loss of appetite, imperfect digestion, nausea, headache, irritability, mental depression, bad complexion, acne, sleeplessness. Hysteria in the female and hypochondria in the male have been often caused by constipation, and it is even stated that a condition of disease bordering upon insanity may be brought about by a long-continued defective formation of feces and imperfect action of the bowel. Moreover, the material which should have been removed will accumulate in the blood, and in consequence such diseases as gout, rheumatism, etc., may be developed.

The direct effects of constipation from any cause may be quite serious—*e.g.,* fecal accumulations in the cecum, colon, sigmoid flexure, or rectum may induce intense colic, inflammation, ulceration, and even perforation of the intestine; pressure on intrapelvic blood-vessels and nerves may be productive of menorrhagia, neuralgia, uterine catarrh (?), hemorrhoids (if they do not already exist), and in the male seminal emissions, prostatic irritation, etc.; not infrequently it exerts a most pernicious influence upon the process of primary digestion; there is fetid breath, coated tongue, flatulence, anorexia, jaundice, and the urine may be loaded with urates; remotely there may be induced general bodily and mental lassitude, headache, vertigo, anemia, together with other more or less characteristic systemic disturbances, *et hoc genus omne.*

Statistics show that constipation is universally prevalent in

the United States, and this may be largely accounted for by: (*a*) the slight attention given to healthful athletic or physical exercise, which, when utilized, tends to perfection of the human economy; (*b*) gross errors of diet, inordinate eating, the ingestion of too small quantities of pure water between meals; (*c*) the almost universal American habit of taking laxatives—mineral waters, aperient pills, anticonstipation granules, cathartic wafers, antibilious pastilles, purgative pellets, etc., etc., *ad nauseam!*

The versatile editor of one of our foremost medical periodicals[1] declares that habitual constipation is the bane of the vast majority of American people, who as a class are rapid and injudicious feeders, given to sedentary habits, and the sworn enemies of systematic bodily exercise. Among women and the aged it has long been the *bête noire* of the physician, and no mean factor in the pill and nostrum traffic.

The young and middle-aged women who suffer from habitual constipation are, almost without exception, reaping the consequences of their own folly, indiscretion, or stupidity. A large proportion of those who undergo the trials of the operating-room of the gynecologist in order to secure relief from obscure pelvic disorders are merely the victims of torpid intestines and all the concomitants thereof. Perhaps the dilated cervix, curetted uterus, and much-abused adnexæ would have been far better treated if attention had been given to a crop of hemorrhoids, an irritating fissure, a proctitis, or an overloaded and congested rectum! Women as a class habitually permit overloading of the lower intestines, thereby courting manifestations that, reflexly and otherwise, simulate a variety of pathological conditions. Dress is in a measure a cause of this: rather than trouble to disarrange clothing, the average woman sedulously resists nature's call until "a more convenient season"—the hour of retiring, perhaps—and then finds she can no longer accomplish the act without extraneous aid.

Murray[2] suggests that mechanical causes of constipation are peculiarly liable to obtain in women. The frequency with which the rectum becomes pouched, bringing down the rectovaginal wall, has not been fully recognized. Rectocele has been mentioned among the causes of constipation, but its importance and mechanism have been overlooked. In constipation due to the cause cited, the author says enemata as ordinarily given are

[1]The Medical Age.
[2]*Medical Record.*

distinctly objectionable, that suppositories are useful, and in many cases benefit is derived by use of olive oil injections.

An excellent prescription for relief of constipation in women when not due to purely mechanical causes is the following:

℞ Podophyllin .....50 grains.
Euonymin ..... 5 grains.
Extract of belladonna .....10 grains.
Extract of hamamelis.....20 grains.
Soap .....30 grains.

Make into fifty pills, and give one or two after the evening meal.

In proportion to the population there is no country on the face of the globe whose people annually consume as great a quantity of purgative medicines as America, and, like other "drug" habits, once commenced its correction or ultimate cure is fraught with difficulties. Moreover, it is notorious that the more so-called laxatives are taken the more are required to accomplish desired results, and it is only after exhausting the long list of self-prescribed nostrums in progressively increasing doses and finding himself unable to secure regular alvine evacuations that the constipated individual is brought to realize the wisdom of applying to the physician for relief. The condition of the sufferer is then usually quite pitiable. Defecation is difficult or impossible except after administration of enormous doses of some drastic cathartic; he complains of beginning anorexia, food being neither relished, digested, nor assimilated; nutrition in consequence is reduced to the lowest ebb; almost constant headache and vertigo are present; anemia is marked and emaciation is rapidly progressing; while the head is hot the legs and feet are cold and clammy; the abdomen is flatulent, painful, and tender to the touch; the countenance shows an anxious expression; skin muddy or jaundiced; tongue coated, and breath fetid.

The foregoing in abstract is about the average clinical history elicited by examination of the subject of chronic constipation, one who has not only run the gamut of the long list of patent laxatives, but has likely been enmeshed for a considerable period within the net of the "advertising specialist," he who administers the same nauseous decoction to every unfortunate victim that falls into his clutches, no matter what may be the malady the relief of which is sought, and who guarantees to cure everything from pimples to piles, from malaria to cancer, from constipation to gout—indeed, a specialist of the skin and all it holds! And during all this time the patient continues to gorge himself, at least so long as the appetite will permit, with badly prepared,

imperfectly masticated food; as a result the intestinal canal becomes repeatedly overloaded with masses of irritating, half-digested material, the removal of which necessitates larger doses and more drastic purgatives!

Many cases of obstinate constipation are directly traceable to the rapid ingestion of improperly prepared, imperfectly masticated food, with the necessary resultant concomitant of defective peristalsis; and be it said physicians in treating such cases too frequently commit the seemingly unpardonable error of prescribing cathartics only, thereby securing to the patient but temporary relief by unloading the *primæ viæ* without in the least modifying the primary causative factor. The writer is not unmindful of the fact that by means of a brisk cathartic the effete mass may be swept from the intestine, but it must also be remembered that repeated efforts of this character only tend to further weaken an already impaired function.

Hewes[1] in a most excellent contribution on the dietary treatment of constipation concludes that in a majority of the cases which occur in the routine of practice the chief if not the only cause or underlying condition is a failure of the individual to follow a normal physiological manner of life, and in a large percentage, taken without reference to the cause or underlying condition, a complete cure, so that the patient can get along without the regular use of drugs or other artificial aids, can be established by a proper direction of régime and diet.

Wetherby[2] agrees that a large proportion of cases of constipation arise from habit, and the only practical method of relief is to follow the rules of Matthew, which are: (1) Eight to twelve ounces of hot or cold water on rising in the morning; (2) some fruit—apple, banana, orange, or figs—on retiring at night; (3) dress according to the weather, but warmly; (4) avoid sweetmeats, candy, pastry, pies; (5) avoid sedentary life or long sitting in one position; (6) go to stool at a regular hour—best just after breakfast—at which time knead the bowels, especially over the colon, with the palms of the hands, rubbing firmly and forcibly from above downward; (7) practice frequent bathing, especially in tepid or cold water, followed by brisk rubbing of the body; (8) walk a number of miles each day.

Another observer[3] advises that one should abstain from administering cathartics in slight transient disturbances of diges-

[1] *Boston Medical and Surgical Journal.*
[2] *Kansas City Medical Record.*
[3] *The Post-Graduate.*

tion—let nature take her own course. Never put a patient on a one-sided diet for too long a time; the exclusion of vegetables, fruits, and starchy foods in general from the diet is frequently the cause of marked constipation. A hygienic mode of living, regular habits, less business strain and worry, and more outdoor life and exercise are of great importance. The patient should be impressed with the importance of not worrying and bothering about his bowels; train him to have an evacuation once a day at a certain time, either giving no drugs whatever, or administering a very slight cathartic for a short period, then gradually diminishing and ultimately discontinuing its use.

The primary and essential prerequisite in the treatment of constipation is, of course, adequate cleansing of the *primæ viæ* by appropriate measures, medicinal, mechanical, and otherwise; then the individual should be properly instructed in the preparation, mastication, and ingestion of his food, that it may enter the stomach and intestine in condition to be digested and assimilated; little fluid should be taken at meal-times, but an abundance of pure water ingested between meals; the dietary should consist of the simplest articles, those which are easy of digestion and assimilation by the economy, and all meals should be consumed moderately; condiments, as well as very hot and iced drinks, ice cream, etc., should be interdicted; food should be taken only at regular intervals, and then in limited quantities.

The observance of these simple dicta, supplemented by the administration of a digestive ferment, such as taka-diastase, in doses of two and a half to three grains after meals, will oftentimes result in the permanent cure of the most obstinate cases of constipation, especially when induced by vicious so-called table habits, to which attention has been called. Under the most favorable circumstances, however, the intestinal canal may sometimes become overloaded and a mild laxative will be required. In such cases the exhibition of moderate doses of cascara sagrada (rhamnus purshiana[1]) will usually be found effective, since this drug is not only an excellent alterative but also acts as an intestinal tonic, strengthening muscular activity, stimulating secretion, and provoking normal peristalsis.

[1]In this connection the writer desires to call especial attention to two forms in which the active principles of rhamnus purshiana have recently appeared in the market, viz., one called cascara evacuant, and another cascara tonic-laxative globules, both from the laboratories of Messrs. Parke, Davis & Company, Detroit, Michigan. It is believed that those who have used the latter preparâtion particularly can amply testify to its therapeutic elegance, its convenience, and likewise its efficiency.

Knopf[1] recommends the administration of fractional doses of calomel in the treatment of habitual constipation. Of mechanical means the best are walking and deep breathing in the open air, also alternate contraction and relaxation of the diaphragm. All outdoor sports, when not indulged in to excess, are most commendable. Next in importance comes massage as a passive exercise—circular friction and moderate kneading around the umbilicus from right to left, followed by the same movements with somewhat increased vigor along the ascending, transverse, and descending colon. Enemata of hot water should not be used as a routine treatment to overcome chronic constipation. Cold water externally and electricity may be used with advantage. More liquids, more fruits, more vegetables—in short such articles of food as are laxative rather than constipating in their action—should be advised. The habitually constipated individual should avoid all alcoholic drinks, also chocolate, tea, strong coffee, and milk.

Skinner[2] claims the subjects of constipation drink an insufficient quantity of water to meet nature's requirements, that they never take water unless prompted by thirst or at meals, and then they drink too much; that the majority of people drink to excess while eating, thus diluting the digestive juices to a degree which eventually seriously impairs digestion. Considering the quantity of water eliminated by the healthy organism each twenty-four hours—*i.e.*, by the kidneys 42 ounces, by the lungs 23 ounces, by the skin 15 ounces—and the amount ordinarily ingested during the same time, it is quite evident that under most favorable conditions the amount taken is insufficient; but when this is lessened by one-quarter or one-half, as is usually the case, nothing remains to keep the stools soft and in proper condition to be by peristalsis packed down into the sigmoid ready for prompt and easy expulsion.

When constipation owes its origin to local conditions, the rational indications are to first remove the primary causative factor, meanwhile clearing the *primæ viæ* of the accumulated feces by the exhibition of appropriate remedies, then with proper attention to diet, as already suggested, and the administration of taka-diastase for a short time until nature shall have recovered normal equilibrium, it may reasonably be expected that the distressing symptom of constipation will disappear. It must be

[1] *New York Medical Journal.*
[2] *Medical Reporter.*

borne in mind that both taka-diastase and cascara sagrada may be exhibited with most beneficial effect even in the constipation induced by local agencies, to assist in the processes of digestion and elimination, and in promoting normal intestinal peristalsis, though the results as a matter of course can only be temporary until the primary cause of the trouble shall have been removed.

It must be admitted that in the treatment of habitual constipation the patience, skill, and judgment of the medical attendant will often be taxed to the utmost limits. If one will but remember, however, that human beings are largely the creatures of habit, the key to the situation will more often than otherwise be attained.

The constipated individual should be profoundly impressed with the fact that to promote and maintain average physical health at least one alvine evacuation should occur (at a stated time) during each twenty-four hours; that he should cultivate the habit of making the attempt to defecate at the same hour every day; that under no circumstances should this feature be overlooked or neglected, that its observance should become a strict moral duty.

In most instances after once freely cleansing the intestinal tract of the existing accumulation, by improving the digestion by administering the remedies suggested, by having the patient acquire the habit of eating correctly and inducing him to have a regular time for defecation each day, his constipation will be dissipated.

If the subject is addicted to the excessive use of alcohol, morphine, or other drug, and his constipation is thereby induced, correction of this habit becomes a matter of prime importance. If there be present disease of the heart, liver, stomach, or other organ, of course that should receive adequate attention, in addition to the measures suggested for relief of the constipation.

THE third Latin-American congress will be held at Montevideo, January 13 to 20, 1907, under the patronage of the President of the Republic of Uruguay, Don Jose Battle y Ordonez, the minister of education and public works, Don Juan A. Capurro, and the minister of foreign affairs, Dr. Jose Romeu. An exposition of hygiene will be held in connection with the congress. The government has allocated a sum of 20,000 pesos for the purposes of the congress. The previous meetings of the congress were held at Santiago de Chile and Buenos Ayres.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

NEW MEDICAL SOCIETIES.

A possible reflection of a certain measure of discontent in the manner in which the affairs of the American Medical Association are being conducted emanates from Grand Rapids, Michigan. A number of physicians in that city propose to organize a new State society, or rather, as they express it, to reorganize the old State Medical Society, the basis of membership being adherence to the Code of Ethics adopted by the American Medical Association in 1847. "If," says the circular addressed to certain members of the Michigan profession, "the old State Medical Society is revived under the old Code of Ethics, quality in membership, not quantity, will be secured. We believe that physicians should belong to medical societies when worthy, that these bodies should uphold their standards by electing to membership only such as are in thorough harmony with the high principles involved in these standards, as promulgated by the old code." Then this circular goes on to say: "No member of this proposed society can consistently retain or obtain membership in the American Medical Association or in allied bodies as at present conducted." Notwithstanding this somewhat unequivocal statement the circular in question goes on to say: "We do not advocate the refounding of a body whose function it shall be to antagonize the present societies, except in so far as membership in it would require non-affiliation with any and all of them."

It must be regretted that the feeling should prevail, as it manifestly does among certain honored and distinguished members of the Michigan profession, that individual distinction would ensue from severing connection with our national or State societies. We were of the opinion that the Michigan State

Medical Society was one of the best of its kind, that it did good scientific work, and had been an influence for good in unifying and elevating professional life.

It is to be regretted, as the *Medical Record* very clearly and tersely expresses it, that the resolution introduced by Dr. Walker, of Detroit, at the recent meeting of the American Medical Association in Boston, was so expeditiously tabled. The object of this resolution was to provide means for an investigation into the affairs of the association which would have cleared its officers of unjust suspicion. The tabling of this resolution will, of course, only strengthen the suspicion in the minds of many that there is something to be found out, and which will inevitably be found out at a later date.

It is earnestly to be hoped that no wide-spread movement will occur, having for its purpose the organization of societies whose purposes of existence shall be counter to those of the American Medical Association. That association has been a vital and important element in elevating American professional life. The association is growing rich, and with riches comes arrogance and overbearing ofttimes. This can all be avoided, and if the national association restricts its aims and purposes to legitimate and useful work, there will certainly be no *raison d'être* for the formation of new organizations which plainly tell their members they must have nothing to do with the old ones.

EDITORIAL NOTES.

The Ancient Treatment of Leprosy.

Some interesting details in regard to leprosy and its treatment during the middle ages were recently published in a foreign medical journal. Treatment of the scourge at that time appears to have been of the crudest. It was thought that the sovereign remedy for its cure was a snake with a black back. The reptile's head was tied to his tail, and in that position he received a prolonged beating with rods; afterward the head and tail were cut off at one stroke, and all the blood was allowed to drain out of the body. Patients were given this blood to drink; if frothy salivation with swelling of the body was produced, that was held to be of good augury. Ambroise Paré accepted the teaching of Valerianus of Tarentum that lepers should be castrated, not only as a means of preventing the propagation of the disease, but as a

therapeutic procedure, the loss of the testes causing "a cold and moist complexion which is antagonistic to the heat and dryness of leprosy, whereby the liver is cooled and consequently does not burn the humours that are the primary cause of leprosy." Paré, however, admits that there is no specific for leprosy, neither the eating of snakes, nor the drinking of their blood, nor bleeding, cupping, nor baths, nor anything else curing the disease. Gordon, in addition to viper's flesh, prescribed laxative enemata, blisters over the "commissures" of the skull, scarification and cupping, and inunctions with chamomile and other emollient plants. These ancient methods of treating leprosy may appear ludicrous to us, but we may well ask ourselves how much progress has been made in the treatment of this dread disease. Notwithstanding the number of scientific men who have devoted themselves to the study of leprosy, as yet no satisfactory remedy has been discovered to check its progress.

Infections Carried by Cats.

The gentle cat which has so long been a pet in nearly every household is beginning to be regarded as a menace, especially in homes where there are small children. Cats undoubtedly carry many diseases from one house to another, and many cases of influenza, scarlet fever, whooping-cough, measles, diphtheria, as well as other infections, owe their origin to the household tabby which wanders from house to house. As the case against the cat has been so conclusively proven, it behooves every member of the medical profession to warn mothers of small children of the danger of allowing their offspring to fondle this most domestic of animals.

Tubercle Bacilli and Milk.

The spread of tuberculosis of digestive origin was the subject of an important communication made by Professor Calmette to the Paris Academy of Sciences last month. According to Calmette the tubercle bacilli killed by heat, when they are ingested in small doses by animals already tuberculized, hasten considerably the evolution of tuberculosis. Those same bacilli killed by heating are not harmless to healthy animals. In time they produce the lesions which are observed to follow the repeated ingestion of tuberculin. Therefore, the milk from cows known

to be tuberculous or presenting suspicious appearance must be rigorously eliminated from the diet of sufferers from tuberculosis and of even healthy nurslings, even if the milk has been sterilized. Sterilization is not sufficient to make innocuous a milk derived from tuberculous milch cows. Hygiene has taught us that ten minutes boiling of milk affords an adequate safeguard against the bacillus of tuberculosis if such exist. The researches of Calmette on this subject must seriously shake our too easy conviction. He finds that ordinary boiling is not sufficient to destroy the bacilli, and unless the milk is brought to a temperature of at least 115° C. they are still a menace to those of weak digestion.

To Prevent Struggling During Narcosis.

One of the most disagreeable features associated with nearly every operation is the struggling of the patient during the early stages of anesthesia. To obviate this a method of procedure is advocated by the eminent German surgeon, Gersuny. This consists of having the arms and forearms enclosed in long cuffs of celluloid which project several inches beyond the tips of the fingers and make it impossible for the patient to grasp the hands of the anesthetist or the inhaler; the cuffs are kept from slipping off by a tape fastened to the upper end of each and passed over the patient's shoulders. Attempts to sit up are easily frustrated by having a nurse place her hands under the patient's heels and keep them continually elevated one or two inches above the surface. As long as the heels are raised it is impossible for any one to sit up; it requires no muscular strength to effect this. The simplicity of Gersuny's plan to prevent struggling will commend itself to operating surgeons as worthy of being followed.

ITEMS AND NOTES.

The high distinction of the Ordre pour le Merite has been conferred on Prof. Robert Koch.

Fraulein Linden, M.D., has been appointed second assistant in the Anatomical Institute of Bonn.

The Italian Red Cross Society proposes this year to extend its antimalaria campaign to the Pontine marshes.

The newly elected French Chamber of Deputies has among its members forty-six representatives of the medical profession.

It is proposed to establish an international Kurhaus at Carlsbad for the reception of members of the medical profession in necessitous circumstances.

The Finance Committee of the Chicago City Council has granted an emergency appropriation of $10,000 to combat the present epidemic of scarlet fever.

Henrik Ibsen, the great Norwegian dramatist and poet, who died last month, began his business career as apprentice in a small apothecary shop in a Norwegian town.

The President on June 8 signed the denaturized alcohol bill, which provides that alcohol for use in the arts or industries and made unfit for drinking purposes shall be free from the internal revenue tax.

A society for the study of the history of the sciences and of medicine has recently been founded in Berlin. The president is Imperial Privy Councillor von Buchka, the vice-president Professor Pagel.

On May 31 a banquet was given by the physicians of Lowell, Mass., to commemorate the fiftieth anniversary of the entrance into practice of medicine of Dr. William E. Bass, the oldest practitioner in the city.

The American Society of Tropical Medicine, which was founded in 1903, has issued a volume containing an account of its proceedings during the three years of its existence. The papers read at the meetings of the society are published in full.

At Munich a large number of working women and wives of workmen have decided to establish a coöperative lying-in and gynecological hospital where they are to be taken charge of and nursed during and after confinement, and where gynecological operations are to be performed.

The Physicians' Club of Escanaba (Mich.) is the name given to an organization formed on Tuesday, May 22, 1906. A schedule of fees was adopted, and officers were elected as follows: President, Dr. A. F. Snyder; vice-president, Dr. H. B. Reynolds; secretary, Dr. H. W. Long; treasurer, Dr. John D. Groos.

A meeting of the class of 1905 of the Faculty of Medicine, University of Toronto, was held recently, at which it was decided to adopt as "class boy of 1905" the first male child born to a member of the class married subsequently to graduation. This is intended as an encouragement to the young doctors to marry.

The New Jersey State Board of Health's bill providing for the manufacture and free distribution of antitoxin was vetoed on June 8 by Governor Stokes, on the ground that as some municipalities already supplied free antitoxin it would be unfair to these to use State moneys to furnish antitoxin to other communities that were less liberal.

Surgeon-General Wyman has obtained permission for the United States Public Health and Marine Hospital Service to establish quarantine and disinfecting stations at St. Lucia and Barbadoes. This is done so that vessels which have been passed at these ports may be allowed to enter the port of New Orleans without the customary period of detention.

A tragic occurrence was the death of the prominent Portuguese oculist, Dr. Mascaro, who suddenly became unconscious while reading a paper before the section on ophthalmology at the Lisbon Congress. He did not recover consciousness, and died on the same day. Dr. Mascaro was independent of practice and devoted himself to the treatment of the poor, for whom he had founded a private free hospital and training school for the blind.

On the advice of the Council of Hygiene, the Mexican government has ordered that the confessionals in all the churches of the city of Mexico must be regularly disinfected with the purpose of preventing the transmission of infectious or contagious disease. They are used by crowds of persons of both

sexes and might easily become contaminated. Priests disobeying this order or showing negligence in carrying it out are liable to imprisonment.

THE Minnesota State Dairy and Food Department announced on May 28 that it had inspectors out procuring samples of all patent medicines, and that a careful examination and analysis of all such medicines on the market would be made. The contents of each medicine will be published in a weekly bulletin to be issued by the department, which will have wide circulation. If the medicines contain opiates, alcohol, or other deleterious substances, the fact will be published, together with the quantity.

THE centenary of Feuchtersleben's birthday was celebrated with great solemnity by all medical corporations, especially by the College of Physicians and Surgeons, in Vienna, on April 29. The famous poet, statesman, physician, and investigator, combining the knowledge of the best of his time, died at the early age of forty-three, but his achievements and his genius were sufficient to throw open new ways to the scholastic medicine of those days, and to induce many students to take up the research of psychophysical facts.

AMONG the members of the medical profession in foreign countries who have recently died are Dr. S. Schreiber, formerly professor of anthropology in the University of Bucharest, and afterwards a leading neurologist of Budapest, aged seventy-one; Surgeon-General A. von Kristopenko, inspector of Russian benevolent institutions; and Dr. Herman Obst, extraordinary professor of ethnology and anthropology in the University of Leipzig, and author of an atlas of anatomy which has gone through two editions, aged sixty-nine.

THIRTY-THREE colored physicians were recently graduated from the Leonard School of Shaw University, at Raleigh, N. C.; the ten professors in this excellent institution are prominent white physicians. The course of study extends over four years. Besides Leonard there are schools devoted to the same purpose in Washington, Knoxville, Nashville, and New Orleans; and these and similar institutions have graduated some fifteen hundred colored men now practicing in the United States. There were also thirteen graduates in pharmacy from Shaw University. In many Southern cities there are first-class drug stores owned and operated entirely by colored men.

THE American Medical Editors' Association held a very satisfactory annual meeting in Boston on Monday, June 4, under the presidency of Dr. Henry Waldo Coe, of Portland, Oregon. Officers for the ensuing year were elected as follows: President, Dr. James Evelyn Pilcher, of Carlisle, Pa.; vice-presidents, Dr. Frank P. Foster, of New York, and Dr. Charles F. Taylor, of Philadelphia; secretary and treasurer, Dr. Joseph McDonald, Jr., of New York. The success of the annual banquet at the University Club was largely due to the endeavors of Dr. Charles Greene Cumston, of Boston.

A GENERAL institute of psychology, specially intended for the study of the phenomena of subconsciousness, the investigation of the causes of criminality, and the discovery of means of curing social evils, will, it is announced, shortly be formally constituted in Paris. Among those to whom the initiation of the scheme is mainly due are Professors Brouardel, d'Arsonval, and Gariel, and MM. Boutroux, Giard, and A. Picard. In January last M. Dubief authorized a lottery of four millions of francs, the product of which will be applied to the purchase of a site for the proposed institute, and the erection of a building containing a series of fully equipped laboratories, a library, and a museum.

A "NURSES' KINDERGARTEN" has recently been opened in connection with the Bellevue Training School in New York City. This and the Probationers' Home at Johns Hopkins are the only institutions of their kind in the country. Only the elements of a nurse's profession are taught, such as cooking, the care of the sick, and the feeding of patients. In the primary school in New York there are now eighteen probationers, averaging in age twenty-seven years. The object of its founders was to relieve the Training School of its primary classes, and to provide room for a larger number of those who had made a preparatory study of nursing. The Bellevue Training School has always received more applicants than it could accommodate.

THE Institute for Hydrophobia, which forms a department of the German Imperial Board of Health, has published its annual report, from which it appears that 400 individuals were treated in the institute during the year 1905. Of these 5 died. In 311 of these 400, that is 71.3 per cent, artificial transplantation of the disease to rabbits gave proof that the attacking animal was suffering from rabies. In 68 cases (14.6 per cent) no proof, but

only suspicion, of rabies existed; 391 of the cases (88.8 per cent) had been bitten by dogs, 21 (4.8 per cent) by cats, 23 (5.2 per cent) by cows, 2 (0.5 per cent) by pigs, and 3 (0.7 per cent) had taken the infection from human beings. Two medical men and thirteen veterinary surgeons were amongst the patients.

According to the figures published at the National Tuberculosis Congress recently held in Berlin, there has been a decrease of 38 per cent in the number of deaths from tuberculosis in Germany since 1875. Sanatoria have restored to health and work 34 per cent of the patients treated. During 1905, 26,621 persons coming under the workmen's insurance act were treated at sanatoria. The results obtained at dispensaries were also excellent. Thus, in 1905, 15,161 persons were examined in Berlin and 8200 apartments inspected and modified, so that infected persons could be isolated. The insurance companies of Germany from 1901 to 1905 spent 1,900,000 pounds in fighting tuberculosis. The outlay included the establishment of twenty-six sanatoria with 2111 beds for women and ten sanatoria with 541 beds for children.

Mr. Henry S. Wellcome, of London, England, is organizing an exhibition in connection with the history of medicine, chemistry, pharmacy, and all allied sciences. It is his aim to bring together a collection of historical objects illustrating the development of the art and science of healing throughout the ages. The exhibition, which will be strictly professional and scientific in character, will not be open to the general public. For many years Mr. Wellcome has been engaged in researches respecting the early methods employed in the healing art, both among civilized and uncivilized peoples. In particular it has been his object to trace the origin of the use of remedial agents. There is a considerable amount of information scattered throughout the world of folk-lore, in early manuscripts, and in printed books, but the difficulties of tracing out and sifting the evidence are great. Mr. Wellcome will greatly value any information sent him in regard to medical lore, early traditions, or references to ancient medical treatment in manuscripts, printed works, etc., and he undertakes that the greatest care shall be taken of any objects of historical medical interest lent for the exhibition.

NEW PUBLICATIONS.

HUMAN SEXUALITY.

This new treatise on the sexual question seems to be a very complete whole question of human sexuality, its origin, its manifestations, its varia- whole question of human sexuality, its origins, its manifestations, its variations and perversions are recorded in a manner which will be surprising to the disingenuous reader. The sex problem is one which is at the foundation of all sociological institutions, and there is no good and sufficient reason why an ignorant prudery should seek to throw a mantle of obscurity over every attempt to realize a full and complete understanding of it. There is little doubt that this book will find readers who will assimilate its contents with eager avidity.

Human Sexuality. A Medico-literary Treatise on the Laws, Anomalies, and Relations of Sex, with Especial Reference to Contrary Sexual Desire. By J. Richardson Parke, Sc.B., M.D. Professional Publishing Co., Chicago.

LA QUESTION SEXUELLE.

Another study of sexuality in all its aspects comes to us from France. Professor Forel's work is one of great interest, and treats the complex question of human sexuality from many new and original standpoints. This work is one of great interest, and is written in the easy and flexible style of the best scientific writers. This work and the one previously reviewed will give the physician a pretty good working library on the sex problem.

La Question Sexuelle, Experée aux Adults Cultivés. Par August Forel, Ancien Professeur de Psychologie à l'Université de Zurich. G. Steinheel, Paris.

INTERNATIONAL CLINICS.

The sixteenth series of International Clinics in its first volume presents us with the usual number of good lectures. There are many seasonable subjects commented upon. We may signalize Dr. Barry's lecture on the dechloridation, treatment, and diseases of the heart as timely and opportune. The summary of the progress of medicine during the year 1905 is a very useful piece of medical condensation.

The International Clinics. A Quarterly of Illustrated Clinical Lectures by Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A.M., M.D. Volume 1, 16th Series. Philadelphia and London: J. B. Lippincott Company.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Causation of Tumors.

A. H. Levings *(Clinical Review,* June, 1906) says that tumors never occur in perfectly normal and healthy tissues of individuals. The dermoids and teratomata are usually congenital growths, and are due to inclusion of one or more of the germ layers. The cysts are due to a variety of causes, such as obstruction of a duct or an acinus of a gland; stimulation of epithelial nests or vestiges, and inflammation and parasites. Solid epithelial tumors also occur in epithelial nests as a result of stimulation or irritation. The solid connective tissue tumors are often the direct result of an injury, continued irritation, or chronic inflammation. The papillomata are usually produced by irritation. The granulomata are due to the irritation incident to the presence of their germs within the tissues. The growths are always made up of connective or granulation tissue. While injury and irritation are seeming factors in the production of these tumors, it is evident that there is something more potent than this, something that is special and forceful. Whatever this energy, or perhaps organism, is, it must lie within the cells and be capable of exerting its remarkable influence upon all kinds of cells, both epithelial and connective tissue. In these matters this influence differs markedly from that of the organism of the granulomata. It is possible that this misplaced energy acts in two ways: in the one it changes the relationship and removes the restraining influence of the adjacent cells, and in the other it incites the cells implicated to proliferate remarkably. This in substance is the theory of Rebbert.

Review of Recent Observations on Treponema Pallidum of Syphilis.

Chas. A. Pfender *(American Medicine,* March 10, 1906) calls attention to the nomenclature of the organism now almost universally conceded to be the etiologic factor in the production of syphilis, and states that under the international code the present correct name of this protozoön is "Treponema pallidum." He states that thus far treponema pallidum has been found in over

300 cases of syphilis, and not found in 62 cases examined. Most of the cases which resulted negatively were of tertiary form, while others were undergoing active treatment at the time of examination. In only one out of 138 cases of non-syphilitic disease examined was treponema pallidum reported. He further states that in view of the results of the experiments made on monkeys and anthropoid apes, the negative results in attempts to demonstrate treponema pallidum in non-syphilitic diseases, and the numerous positive observations on syphilitics, it is exceedingly difficult to escape the conclusion that treponema pallidum is the organism which produces syphilis. He gives a detailed description of a number of stains, and the various methods employed by different observers in the study of the treponema, and appends an extensive bibliography.

Carcinoma of the Prostate.

Hugh H. Young *(Journal of the American Medical Association,* March 10, 1906) gives the results of the study of fifty cases of cancer of the prostate and describes the radical operation performed by him, including the excision of the entire prostate with its capsule and urethra and the adjacent portion of the bladder, the seminal vesicles, and the ampulla of the vasa deferentia. He considers this a common disease, existing in about one-seventh of the entire number of cases of prostatic enlargement in men over fifty. Induration and pain are common, and aid the early diagnosis. The growth is often slow, confining it within the limits of the firm prostatic capsule for a long period. He claims that his operation, which is necessary for its cure, is not difficult and gives very satisfactory functional results, and that with early diagnosis the mortality should be *nil* and the percentage of cures large. Every indurated enlarged prostate should be suspected, and a perineal operation advised, when if malignancy be discovered the radical operation can be resorted to.

On the X-ray Examination of Kidney Stones.

C. T. Holland *(Lancet,* June 2, 1906) says that when a stone or stones are present in such size as to produce symptoms suggesting the desirability of operation, if a careful and thorough examination is made such stone or stones can nearly always be shown by *x*-rays. And this would also apply to the presence of

stone even if the symptoms alone were not sufficient to demand operation. In most cases where shadows are shown, the size, shape, and position can be relied upon in diagnosing them as from kidney or ureteral stones. In other cases when doubt may arise as to the cause of the shadows, the experience of the examiner will often settle the matter, and in some cases stereoscopic radiography, the use of ureteral bougies, etc., can be used as a help. The negative diagnosis can be relied upon only when the whole region on both sides is carefully examined, and when the plates are taken under the essential condition for successful examination, and when they are of the necessary quality in showing sufficient differentiation of the soft structures in the kidney and ureteral regions. There can be no justification for operation or prolonged medical treatment without an efficient *x*-ray examination being made.

Malignant Growths on Dogs' Genitals.

Sticker *(Archiv für klin. Chirurgie)* in reviewing the literature on the subject finds that the tumors observed by various writers were all round-cell sarcomas. All infectious processes as a rule start in the submucosa, and sarcomas always do so. Several cases are recorded of the transmission of sarcomas by intercourse; this, however, may be due to transplantation of tissue in an excoriation and not due to contagion. The author has observed the spontaneous healing of transplanted sarcomas, whilst in the controls the result was always fatal. Animals recovering from transplanted growths are not susceptible to further inoculations. Inoculation can only be performed with the uninjured cells of the growth and not with virus as in infections.

Large Live Lumbrici in an Ovarian Dermoid.

M. Amann *(British Medical Journal,* May 12, 1906*)* reported a case in which an ovarian dermoid cyst contained live organisms far above microbes, as well as highly organized tissues. The patient had suffered from fever after delivery, and the dermoid tumor which she bore suppurated, as is not rarely the case. It contracted parietal adhesions, and ultimately pus discharged from the umbilicus, a complication not unknown. The suppurating sinus was laid open and a cavity of pus exposed; then a tuft of

hair and some teeth were extracted. A mass of something indefinite lay deep in the sac; it was observed to move, and proved to be three large lumbrici twisting round each other. The longest measured nearly one foot in length. The most curious feature in the case was the absence of any trace of feces or fecal odor in the cavity of the dermoid cyst, although the worms could only have entered through a communication with some part of the alimentary canal. No feces came away during convalescence, the cavity being drained and allowed to close, though the ultimate history of the case is not published.

A Method of Checking Asepsis in Operations.

Doderlein *(Deutsche med. Wochenschrift,* 14, 1906) keeps a number of sterile pledgets of gauze in sterile tubes, and during the course of the operation various parts of the wound, operator's hands, and instruments are wiped off with them. The pledgets are then placed in liquid agar and the whole thing poured out into sterile Petri dishes. In 5000 such experiments he found that none failed to show some growth even when gloves, masks, etc., were used. The folds in rubber sheets were found to conceal large numbers of germs even after supposed thorough disinfection. He found that the patient's skin was always a fruitful source of germs, and to overcome this he paints the skin with a solution of rubber. He uses a solution of rubber with formalin, ether, and benzine, applied after shaving, and painting with a solution of iodine; after applying the rubber solution it is dusted with sterile talcum powder.

MEDICINE.

The Effects of Uric Acid on the Genito-urinary Tract.

W. H. Porter (*New York Medical Journal,* May 12, 1906) says that uric acid is one of the normal end products of proteid oxidation reduction. It is never present in any food substances. It is never found in the blood. The antecedent proteid molecule from which uric acid is made is contained in the blood. Uric acid is made in renal cells by the oxidation reduction of the desulphurized proteid molecule. The proteid molecule is desulphurized in the epithelial cells of the gastric follicles and in the hepatic cells. In gout, uric acid is formed in protoplasmic struc-

tures other than renal cells by a vicarious action by which the proteid molecule is oxidized at an abnormal point. It is absolutely necessary to have uric acid produced in the renal cells. When uric acid is produced faster than it can be converted in the uriniferous tubules into a urate, we have it overproduced. The urate is produced by the action of the uric acid on the neutral phosphate, thus forming the urate and an acid phosphate. Sulphuric acid is formed in the epithelial cells of the kidney from the proteid molecule. In the cavity of the stomach the sulphuric acid acts upon the sodium chloride, forming hydrochloric acid and sodium sulphate. The hydrocloric acid in the lumen of the intestine attacks the alkaline sodium phosphate, restoring the sodium chloride lost in the stomach and forming the neutral salt for the blood.

The three etiological factors causing overproduction of uric acid are defective oxygen supply, overfeeding, disturbances in the nervous mechanism. Uric acid is formed by oxidation reduction and not by synthesis. The intensity of the toxin transformed in the kidneys determines the character of the lesion. The effects of the overproduced uric acid are renal hypertrophy, parenchymatous degeneration of the kidneys, and diffuse or interstitial transformation. The overproduced uric acid may cause a catarrhal condition of the pelves of the kidneys, or a truly inflammatory process may result. The overproduced uric acid may act as a general irritant to the whole genito-urinary tract. Giving alkalies masks symptoms, but never removes the etiological factors, while the removal of the latter should be the main object of all therapeutics. Overproduction of uric acid may aid in causing phosphatic as well as uric acid calculi. Uric acid may act as an irritant in solution, in its isolated crystalline form, or massed together in the form of a calculus. The action of uric acid on the genito-urinary tract is always mechanical. The effects of the overproduced uric acid are often confounded with disturbances in metabolism that cause the overproduction.

The Etiology of Acute Rheumatism.

L. F. Frissell *(Medical Record,* May 12, 1906) declares that the idea that the disease known as rheumatic fever or acute articular rheumatism is of bacterial origin is no new one. After discussing this subject in some detail, he concludes that as a result of a careful clinical analysis of the pathology and symp-

tomatology of rheumatism one is forced to look beyond the common joint affection to gain a clear idea of such a protean disease attacking the joints oftenest, to be sure, but too frequently the skin, pleura, and heart. Granted a point of entry, probably the tonsil, as the frequency of tonsillitis in rheumatism would suggest, the various conditions vaguely called rheumatic, as well as the out-and-out attack of acute articular rheumatism, seem best explained by considering the essential condition to be a blood infection. Assuming this hematogenous origin, the localization of the symptoms, he says, is readily accounted for by the bacterial embolus or local toxin action. In regard to the nature of the organism at fault, he presents five possibilities: An infection caused by the ordinary streptococci, or staphylococci, with their virulence in some way decreased; infection by a specific bacillus; a mixed infection with bacilli and cocci; an infection with a specific coccus; an infection caused by one of a group of closely allied organisms, probably diplo- or streptococci, which cause various grades of arthritic trouble. This last theory, perhaps, reconciles the view held by those who believe in the specific coccus with that of those who regard the attenuated pus coccus as the causal agent. This, Frissell believes, is strongly suggested by the results of his own investigations.

The Etiology and Prevention of Yellow Fever.

Francesco Fajardo, of Rio de Janeiro (*Lancet*, May 5, 1906), at the recent meeting of the Fifteenth International Congress of Medicine read an official report under the above title. He said in conclusion that although Sanarelli's works have not received scientific sanction with regard to the cause of yellow fever, they are a remarkable scientific contribution, inasmuch as they shed great light on the pathological anatomy of the disease. Up to the present, insignificant benefits have arisen from the recent study of yellow fever with regard to its diagnosis, prognosis, and treatment. The etiology of yellow fever has not so far been discovered definitely, but recent research has been of value in pointing out the direction for future work; this has been done by the American commission and the Pasteur mission. In Brazil the obstinate and prolonged struggle against the mosquito in general and against the propagation of yellow fever in particular would soon banish the disease from Brazilian territory, as was witnessed by the work effected in connection with the discovery

of the epidemic sources in Rio. Simple transmission of yellow fever by the stegomyia could occur during the day between 9 and 3 o'clock, though rarely. To-day the prophylaxis of yellow fever rests on scientific facts, and can be applied everywhere with a satisfactory result.

A Case of Syringomyelia with Partial Macrosomia.

M. G. Schlapp *(Medical Record,* May 5, 1906*)* states that it was not until recent years that the combination of a condition of hypertrophy of one or more extremities or other parts of the body with symptoms of syringomyelia was recognized as being caused by the same lesion, syringomyelia. He gives the history of an interesting case. The patient, a man thirty-eight years of age, had been well up to two years ago. At this time he had an attack of indefinite illness, followed by a swelling of the left shoulder, arm, and hand to about twice their normal size. They have since been somewhat larger than the right arm and hand. There is complete loss of the pain and thermal senses over the whole of the left arm and hand, and on the surface of the back and chest, neck, and back of the head. There were attacks of total blindness in the left eye lasting about five minutes. The bones were involved as well as the soft tissues. They show greater opacity than do the normal bones. In this case there is a paralytic dilatation of the blood-vessels with edema caused by a lesion lying remote from the hypertrophied tissue and in no way directly affecting it. As it is impossible for the writer to obtain histological sections of the tissues the study of the case is not complete, but he thinks it probable that the tissue hypertrophy is the result of the bioplastic as well as the catabiotic process.

A Case of Osteomalacia.

C. Castel *(British Gynecological Journal,* February, 1906*)* in an extensive private and hospital practice has only met with one instance of osteomalacia, an extremely rare disease. The patient was a childless woman, aged twenty-eight, and the disease had commenced in her twenty-second year. The symptoms were typical—violent pains, deformities, anomalous menstruation, and 5 or 6 centimeters loss in height. Half a year's strengthening treatment proved of no avail, but the administration of ovarine for four months brought about decided improvement; a fracture,

dating from the commencement, healed promptly; the pains, especially those in the thorax and spinal column, became much less severe; the patient was able to remain for hours in one position, which she found it impossible to do previously; and the catamenia became regular. After the course of opotherapy, phosphoric acid was given her for three months and apparently was more effectual than the ovarine; the pains disappeared altogether, and she became able to walk without any support whatever. Unfortunately, she died soon afterward from spotted typhus fever.

Dyspepsia in Elderly Individuals.

J. S. McLester *(Journal of the American Medical Association,* May 26, 1906) calls attention to the possibility of gastric cancer when symptoms of indigestion appear for the first time in elderly people or as an exacerbation of a previously mild condition. Such cases are naturally first seen by the family physician, and on him devolves the responsibility of seeing that nothing is omitted that will aid in arriving at a proper diagnosis. We have come to suspect cancer when uterine hemorrhage occurs after the menopause, and why, he asks, should we not give to the stomach the same consideration as regards the pathologic possibilities when in advanced life it begins to show signs of disease? Examples of overlooked cancer under these conditions, he says, are common, and he reports three cases of his own observation, all hopeless when received at the hospital, which could possibly have been saved with an earlier diagnosis. In these cases of gastric disorder, in elderly persons, every means of diagnosis should be employed, even to exploratory incision, when other methods still leave a reasonable doubt.

Without Mosquitoes There Can Be No Yellow Fever.

James Carroll *(American Medicine,* March 17, 1906) argues that the logical conclusion from investigations which have been made would seem to be that the parasite of yellow fever belongs to the animal kingdom, for the reasons that (1) it is absolutely necessary for its continued existence that it pass alternately through man and the mosquito, and its parasitic existence in these hosts is obligatory. (2) The fact that a period of about two weeks must elapse before the contaminated mosquito is capable

of infecting points to a definite cycle of development in that insect. (3) The limitation of its development cycle to mosquitoes of a single genus and to a single vertebrate conforms to a natural zoölogic law and does not agree with our present knowledge of the life history of bacteria. (4) The effects of climate and temperature upon the stegomyia and upon the rate of development of the yellow fever parasite within the body of the insect are exactly the same as the effects of the same conditions upon the anopheles mosquito and the malarial parasite.

Two Cases of Pseudoleukemic Anemia of Infancy.

E. M. Sill *(Medical Record,* Feb. 3, 1906) says that von Jaksch in 1899 and 1890 was the first to give this title to the disease. According to Luzet it is very rare and does not occur after the second year. He met with it only once in 1500 cases of anemia. In the diagnosis he lays great stress on the presence of nucleated red blood cells. Those who have studied the subject claim that syphilis, rickets, malaria, and the digestive disturbances have nothing to do with the disease. Monti reports, however, more than three-fourths of his cases as showing evidence of rickets, and one patient had syphilis. The prognosis in the severer cases should always be guarded. All Rotch's cases ended fatally, and 20 per cent of the cases reported by Monti. The writer reports that one of his patients died six weeks after he was called in; the other is still alive after five months and is steadily improving. The treatment has been proper diet, cod-liver oil, and Fowler's solution.

Pathogenesis of Pulmonary Tuberculosis.

F. Weleminsky *(Canadian Journal of Medicine and Surgery,* May, 1906) has revealed the exceptional position occupied by the bronchial glands in the lymphatic system. Guinea-pigs were infected with tuberculosis at various points and the glands examined later. It was found that the infection never occurred through the blood, but always by way of the lymphatics. The bronchial glands seem to be the terminal reservoir, not only for the lung lymph, but also for the lymph from the rest of the body, before it is poured into the blood system. When animals were inoculated in the peritoneum, rectum, or subcutaneously in the groin, at first it seemed as if the infection followed an arbitrary,

erratic course, but the discovery of hidden glands showed the regular sequence of the progress of the infection, without an exception, in his last 300 experiments. The bronchial glands are like a kind of heart, in which the lymphatics from all sides discharge their contents, including tubercle bacilli, from remote points of entrance.

Colorimetric Test for Chlorides in the Urine.

Ekehorn *(Archiv für klin. Chirurgie,* No. 19, 1906*)* employs a graduated tube 15 millimeters in diameter and about 22 centimeters long. A line is engraved on the tube corresponding to 2 cubic centimeters of urine, and is marked U; another line is engraved above this and corresponds to 1 cubic centimeter of the indicator, being marked I; a third line above this also corresponds to 1 cubic centimeter, and is marked zero. Above these marks the tube is graduated into 55 divisions, each equal to 1 cubic centimeter. Two cubic centimeters of the urine is placed in the tube and 1 cubic centimeter of the indicator, and the second reagent is added until the tint changes. This test is practically Volhard's, the same solutions being used.

Chronic Bronchitis and Adiposity.

G. A. Sutherland *(Edinburgh Medical Journal,* April, 1906) sums up the changes in fat people in whom bronchitis develops as follows: (1) Vascular obstruction from increased peripheral resistance in fatty tissues. (2) Cardiac weakness from deposit of fat about the heart. (3) Pulmonary obstruction from excess of carbonic acid in the blood. To produce a cure the first and most essential procedure is to remove the excess of adipose tissue. In a short time the chronic wheeze will disappear, also the shortness of breath, and the ability to walk up-hill comfortably will be increased. For the remainder of the patient's life his meals must be moderate in amount, the carbohydrate being notably small.

Determination of Lead in the Urine.

A. Lederer *(Journal of the American Medical Association,* May 26, 1906) remarks on the disadvantages of the methods usually employed in testing for lead in the urine, and describes

the test which he uses, and for which he claims special advantages in accuracy, quickness, and simplicity. It consists in precipitating the lead, free from all organic matter, by means of potassium sulphate in sulphuric acid solution, washing down the insoluble sulphate thus precipitated with distilled water, and passing hydrogen sulphide gas through it. The slightest yellowish-brown discoloration proves that lead is present. A great disadvantage of this test, he says, is that even if bismuth is present it will not affect it, nor will any other substance that is likely to be present. By comparison with artificial lead solutions containing 1 mg., 2 mg., 3 mg., etc., of lead per liter, a simple quantitative colorimetric method can be established.

Recurrent Aphthous Stomatitis.

Schilling *(Centralblatt für Innere Med.,* 1906) reports a case of recurring aphthous stomatitis. The patient came to him for some derangement of digestion to which he attributed the fetid breath. Examination showed that the patient's artificial teeth were poorly fitting and had caused ulceration of the gums; this injury had afforded a portal of entry for the bacteria, which fairly swarmed in the mouth and on the gums. The case was cured with mouth-washes of hydrogen peroxide and by placing the teeth over night in a solution of formic aldehyde.

THERAPEUTICS.

The Treatment of Abortion.

M. J. Boldt *(Journal of the American Medical Association,* March 17, 1906) divides the treatment of abortion into four parts: (1) Imminent or threatening abortion; (2) progressing inevitable abortion; (3) incomplete abortion (retention of some of the products of conception); (4) complete abortion. As regards imminent abortion, there is a practical unanimity of opinion of the objects to be attained. In other forms there is a wide variance of opinion. Boldt would restrict active intervention in the conditions to cases in which it is absolutely indicated, and if retained conception products have to be removed, it is better, he thinks, to use the finger, if possible, than the curette. He has not observed that patients treated by aggressive methods were better off later than those treated without such

intervention. This does not mean absolute non-intervention in all cases, but that the expectant plan of treatment should be preferred and adopted so far as possible.

He gives detailed instructions as to the special treatment of the different conditions of imminent, progressing, incomplete, and complete abortion, including the use of the tampon, the curette, and other methods. When the curette is used he prefers a broad, sharp instrument to a dull one, as being more efficient and less likely to perforate than a small one. Particular directions are given as to the introduction of the intra-uterine tampon, which should be done under the strictest aseptic precautions, and not after simple washing of the vulva, with the patient in bed. In cases of typical bleeding after supposed complete abortion, in which it is advisable to examine the uterine cavity, he finds discission of the posterior cervical wall a more satisfactory method of reaching it than the use of dilators. It is quicker, and makes a clean wound that can be closed by a few interrupted chromicized catgut sutures after examination. In case of infection the uterus should be emptied as soon as possible, the cervix being dilated if necessary.

The article is full of instructive details. In conclusion he reports two cases: one illustrating the sometimes puzzling conditions met with in the severer cases of sepsis after criminal abortion, and the other showing the absence of detectable pathogenic microörganisms sometimes observed even with the most virulent uterine sepsis.

The Care of the Sick Outside of Institutions.

Bertha A. Rosenfeld's article *(Medical Record,* Jan. 27, 1906) deals with the treatment of the insane, who, she says, can most efficiently be cared for only outside of large institutions. In these it is impossible to give each patient the detailed attention that his needs, bodily and mental, may require, and the general environment also is likely to be unfavorable to recovery in many cases. She suggests the establishment of numerous homes for invalids, in some of which patients who are voluntarily under treatment will be received, while others are intended for individuals requiring commitment. A beginning in this direction may be made by enlisting the aid of religious orders. In early cases of mental disease promptness in starting treatment may be very important, but is often impossible on account of the delays now

attendant on securing commitment. It is a deplorable fact that there is no State provision for border-land cases in which stay in a big institution would be unsuitable, or for those among the poor who have recovered so far that removal from institutional care would be desirable but are not yet quite ready for discharge. This need is in some localities met by boarding out-patients in homes near the hospital and under official supervision.

The Management of Constipation in Infancy.

Thos. S. Southworth *(Annals of Gynecology and Pediatry,* June, 1906) says that while the constipation of bottle-fed infants should in theory be largely avoidable, the condition only too frequently confronts us. It is ordinarily best met by a general increase of the strength of the food with possibly a somewhat greater increase in the fat, but not one exceeding four per cent. Orange juice should be given after six months of age, and if there be the usual evidences of rachitis, cod-liver oil also. Oatmeal gruel may be substituted as the diluent, and a malt sugar preparation be substituted wholly or in part for other forms of sugar. These measures, one or several of which may be required, according to the stubbornness of the case, usually suffice, but if they fail, cascara is the best regulative, increased from small doses until results are obtained. In his experience infants require relatively full doses of cascara preparations.

Treatment of Acute Articular Rheumatism.

D. Ranzier *(British Medical Journal,* May 12, 1906) in a paper on the treatment of acute articular rheumatism points out the main lines on which it is to be carried out, and discusses the salicylate treatment and the treatment of the affected joints. When salicylate of soda cannot be tolerated by the stomach he recommends that it should be given per rectum. Pregnancy and cerebral, cardiac, and renal complications contraindicate the use of salicylates. In pregnancy he thinks the best drug to employ is antipyrin. As an application to relieve pain in the affected joints he recommends a lotion containing oil of henbane and laudanum; he also thinks salicylate of methyl of great service for the relief of the joint pains. It should be applied to the skin over the affected joints, and covered with cotton-wool and a piece of water-proof material. The vapor given off from this drug

is absorbed by the skin, and gives rise to the formation in the blood of salicylate of soda. Locally, it causes some redness of the skin and slight smarting, but has a marked analgesic effect. It should not be applied in the form of an ointment, as it is thereby liable to lose much of its therapeutic value.

The Treatment of Flatfoot.

George C. Wilkins *(International Journal of Surgery,* May, 1906) says that in the treatment of flatfoot the following points must be borne in mind: (1) The foot must be in such a condition that it can be placed in a normal position before a mechanical support is used. (2) A plate should be made to fit the individual case and foot. (3) The patient should practice exercises to strengthen the arch. (4) It may be necessary to alter the plate after a few weeks' wear.

Treatment of Fatty Heart.

F. P. Gengenbach *(Denver Medical Times,* May, 1906), in discussing the treatment of this condition, says we should place the system as rapidly as possible in a condition to functionate properly. Regulate the diet, particularly in amount, so the body will be properly nourished, without the formation and deposition of excessive fat. Regulate the exercise, baths, and other hygienic measures to the individual case. Give general tonics as needed. Use heart tonics and stimulants as indicated.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

A Case of Tympanic and Mastoid Cholesteatoma.

Donald Barston *(Medical Record,* Feb. 10, 1906) reports this case. The patient was a boy twelve years of age, with the following history: Ten years ago he had scarlet fever, when he suffered with pain in, and discharge from, the left ear. Ever since that time there had been more or less discharge from the ear. Examination showed a large perforation in the left tympanic membrane, through which a foul-smelling pus, mixed with

small masses of cheesy consistency, was slowly discharging. Marked tenderness over the entire mastoid region was noted. The mastoid was opened according to Whiting's method. The antrum attic and adjacent region were full of foul-smelling cholesteatomatous matter. An extradural abscess covered the entire sigmoid sinus as high as the knee, and extended forward and backward, covering an area about the size of a 25-cent piece. The sinus was not opened. The antrum and tympanum were thrown into one cavity by chiseling away the posterior wall of the bony meatus. The tympanum was carefully curetted.

Within the next day or two the patient had several chills, followed by high temperature. Thrombosis of the sigmoid sinus was evident, and a second operation was performed. The sinus was opened and a soft, gray clot was removed. The jugular vein was not tied off, but the cut ends of the jugular were plugged with iodoform gauze. For the following five days the patient was comfortable. He then had a slight chill, followed by pyemic temperature, which lasted seven weeks and five days. During this period two further operations were performed, the entire jugular vein being dissected out. Although daily careful examinations for metastatic abscesses were made, none was found. The patient was in the hospital eight weeks and four days, and during this period he had thirty-nine chills. The highest temperature recorded was 107.8°, in the axilla; the lowest temperature was 96°, in the mouth. After his discharge from the hospital the patient presented no unusual features, his convalescence being uneventful.

Ocular Movements Similar to Those Found Normally in the Ungulates.

Wm. L. Phillips *(American Medicine,* March 24, 1906*)* describes cases which show the preservation of ocular functions existing normally only in some animals. Reports are given of two cases, each presenting essentially the same conditions—*e.g.,* Mr. X. can see 20/20 with each eye separately and without glasses. It is possible for him to fix with both eyes, to turn either one out slowly and back again to double fixation without disturbance while reading. He is also able to converge both eyes simultaneously to extreme divergence. Besides this he can move them both to the extreme right or to the extreme left, or, by holding one in any position, from extreme divergence to extreme

convergence, look at the side of his nose with the other. At no time since birth did he have double vision, and it is not produced even by the use of strong prisms. He finds that monocular vision is more restful than binocular vision, because of less head rotation. In each of these positions he has both eyes in focus, seeing with one in front and the other at the side. The second patient could, with one eye, see to set type, and at one side read proof with the other without the necessity of movements of the eyes. Illustrations show the remarkable anomalies.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Some Common Dermatoses.

O. S. Ormsby *(Journal of the American Medical Association,* May 26, 1906) considers the points of interest in some of the common diseases of the skin which are accompanied by the sensation of itching, with special reference to their differential diagnosis. He defines the terms pruritus and itching, and states that they have been used so often interchangeably that they would seem synonymous. He states that prurigo is now restricted to the disease first described by Hebra, and states that it is chronic and usually incurable. The earliest lesions, he says, are urticarial, after which the classic lesion, a colorless, slightly reddened papule, appears. The essential cause is unknown, but the disease is generally classed as neurosis. Poverty and insanitary conditions are predisposing causes, and males are more often attacked than females. Pruritus, Ormsby states, is a disease, not a symptom. It is a sensory neurosis, in which itching is the sole essential symptom. It occurs usually in adults, a common example being the so-called senile pruritus. In local pruritus the areas more often attacked are the anal, vulvar, and scrotal regions, while occasionally the palms, face, and scalp are also involved. He reviews the etiology of the condition at some length, and describes the lesions of scabies with the differential diagnosis.

In the treatment of this condition the writer states that sulphur heads the list of remedial agents. In the treatment of pruritus he states that local remedial agents are very important, and if properly selected and applied are of great value. The best of these, he states, are carbolic acid in oil or lotion; thymol or

menthol, 1 to 4 per cent, in an ointment; resorcin, 0.5 to 2 per cent in a lotion; camphor in an ointment or dusting powder; chloral in an ointment or lotion; and tar preparations. He also recommends hot water, electricity, and radiotherapy. In all cases free elimination should be encouraged by salines and other laxatives. He outlines in detail the treatment in a case of anal pruritus.

GYNECOLOGY AND OBSTETRICS.

Twin Pregnancy, Intra-uterine and Extra-uterine.

V. Neugebault *(British Gynecological Journal,* February, 1906) has found 155 cases of twin pregnancy with heterotopic intra-uterine and extra-uterine ova already published. In twelve instances the final result is not stated; 96 of the women recovered; 47 out of 142 died, a mortality of 30 per cent. He has had two cases under his own observation. The first, a quartipara, aged twenty-four, collapsed suddenly in the second month of gestation, and died a few hours afterward under symptoms of internal bleeding. Section disclosed one ovum in the uterus, rupture of the right pregnant tube, and two corpora lutea of equal size in the left ovary. The pregnancy in the right tube was therefore consequent upon external transmigration of the ovum. No pathological factors for the tubal pregnancy could be found. He supposes that both ova were fertilized at the same time or at an interval of only a few days or weeks.

The second case was that of a primipara, aged twenty-two, who aborted in the second month. She recovered after the use of the curette, but eight days later she collapsed, and laparotomy disclosed a tubal pregnancy terminated by abortion. Recovery.

Spontaneous Rupture Before the Loss of Amniotic Fluid.

A. Czyzewicz *(Centralbl. f. Gyn.,* No. 44, 1905) reports the following remarkable case: A quartipara, aged forty-two, who had developed extreme osteomalacia after her last labor, was brought into the clinic in her agony, her uterus having ruptured though the waters had not come away. Czyzewicz removed the uterus and adnexa after laparotomy, and the patient, contrary to expectation, made a good recovery.

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ORIGINAL CONTRIBUTIONS.

LAPAROTOMY IN INFANCY AND EARLY CHILDHOOD.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

According to a brief paragraph appearing in the *American Journal of Surgery,* an abdominal section was recently performed on a child one day old for the purpose of arresting internal hemorrhage due to rupture of the umbilical artery, and that, too, without administration of an anesthetic; yet the child is said to have pursued the even course of life, as well in fact as if nothing unusual had occurred.

If there be no mistake in this report there can be no doubt that it is the youngest successful case of abdominal section on record; and whether it be true or otherwise, the account suggested to the writer that a few observations on laparotomy in infancy and early childhood might not be entirely devoid of interest, even if possessed of no especial merit from a strictly scientific standpoint.

The statement has been so frequently reiterated that surgery is badly borne by young subjects that the truth of the axiom "surgical intervention in infancy is fraught with infinitely greater dangers than in the adult" is seldom questioned. It has been especially emphasized that laparotomy in the young is much less encouraging and far more frequently fatal than in adults. Lack of appreciation that the patient is an infant, consequently that certain changes or modifications in management and treatment are essential in order to secure results approximating those obtained or expected in the adult, is probably responsible for many of the recorded unsuccessful surgical operations performed upon young subjects. It must not be forgotten that:

1. While the child may and often does take the anesthetic well for a short period, if the administration be unduly pro-

longed collapse is more common than in adults; hence there should never be permitted the slightest delay in completing any operative steps that may be undertaken.

2. The child ordinarily bears loss of blood badly; hence every possible precaution should be observed to prevent hemorrhage, and means should be readily accessible with which to replace such loss, if necessary, by transfusion or introduction of normal saline solution.

3. The child bears cold badly; hence the extremities should always be amply protected, and if necessary kept warm by artificial means. Care should be observed that the body be not unnecessarily exposed, and operation should be performed with the child on a warm-water bed, or at least in a properly heated room.

4. The child bears hunger badly; hence nourishment should not be inadequate before operation, nor should this feature be neglected thereafter—*i.e.*, proper feeding must be resumed so soon as permissible after the operation.

Moreover, the facts should not be allowed to pass unobserved that (*a*) the nervous system of the child is but imperfectly organized and immaturely developed, therefore it is reasonable to assume systemic disturbances, shock, etc., incident to administration of the anesthetic and operative manipulations are much less marked than those which occur in the adult; that (*b*) recuperative and reparative processes are relatively more prompt, and normal equilibrium is more speedily restored in the child than in the adult.

Were these dicta properly and intelligently understood, appreciated, and applied, there would seem good reason for doubting the truthfulness of the statement that necessarily surgical intervention must be regarded as invariably less encouraging and more frequently fatal in the young than in adults. Reports of hundreds of cases may be found in the literature where infants have been successfully operated upon by abdominal section for intussusception; and the same statement is true in regard to numerous other surgical diseases.

In 1883 Chiene, of Edinburgh, performed ovariotomy on a child aged three months. A swelling suddenly occurred in the inguinal region, and after various local measures had been adopted and faithfully tried without securing relief, the infant was operated upon. The contents of the sac were found to be the ovary and Fallopian tube. Recovery.

A surgeon in California recently operated upon an infant aged two months for congenital hernia. The appendix was found to occupy the hernial sac, and was therefore also extirpated. A duplicate of this case was reported by Sherrill, of Louisville, except that the appendix was not contained in the hernial sac. Recovery.

A large cystic tumor was removed by abdominal section by Campbell, the patient being a child aged seven months. The tumor, weighing three pounds, was composed of a cyst containing ten ounces of clear yellow fluid, and a solid portion in which a mass of cartilage and piece of bone lay embedded. There was nothing to indicate the organ from which it originated. This appears, says the author, to be the youngest child from which a cystic abdominal tumor has been successfully removed, the only case which approaches it in point of youth being one operated upon by Roehmer, of Berlin, at the age of twenty months.

Wiel operated upon a child aged five years, doing a left salpingo-oöphorectomy. A median incision was made, through which was delivered a tumor of the left ovary the size of a large cocoanut and freely movable. The right ovary was small and apparently normal. Recovery.

Judkins reports a case of recurrent vesical calculus in a boy aged seven years. At the first operation (suprapubic cystotomy) a stone weighing over ninety grains was removed. Five months thereafter the child again complained of symptoms pointing to vesical calculus, and seven months after the first operation a median lithotomy was performed and a second stone weighing eighty-five grains was removed. No facets were observed on either calculus. A point of peculiar interest is the rapidity with which the second stone formed. Recovery.

Laparotomy was performed by Johnson on a girl aged five years for the following symptoms: Violent abdominal pain, vomiting, and diarrhea. He found and extirpated an ovarian tumor, the pedicle of which was twisted twice around its axis. Recovery.

Ruggi performed several abdominal sections upon a boy aged eight years for relief of intestinal obstruction having its origin in external violence (traumatism). In the last operation he removed three portions of intestine aggregating over ten and a half feet in length, the lower incision being six inches from the ileocecal valve. Recovery.

Roehmer successfully performed ovariotomy on a child

one year and eight months old; Schwartz, on a child of four; Barker, on a child of four; Thornton, on a child of seven; Wells, Cupples, and Chenoweth, on children of eight. Rein performed ovariotomy on a girl of six, suffering from a multilocular cyst of the left ovary, and expressed the belief that childhood and infancy were favorable to laparotomy. Kidd removed a dermoid cyst from a child of two years and eleven months; Hooks performed a similar operation on a child of thirty months; Chiene extirpated an ovary from a child of three; Neville duplicated this operation in a child one month younger; and Alcock performed ovariotomy on a child of three years (Gould and Pyle).

Carpenter, of London, collected from the literature thirty-five cases of ovariotomy (including some of those mentioned by Gould and Pyle) in patients aged twelve years and under. Of these fifteen were dermoids, ten cystic, nine malignant, one fibromyoma. In one case of cystic disease both ovaries were involved, and in another both ovaries were sarcomatous. Among these there were six deaths, and in one case the disease (malignant) recurred two years later with fatal result. The author once discovered the left ovary enlarged in a child of three and a half years; there was sarcomatous infiltration of both kidneys, also abdominal deposits among other areas of attachment. A case of carcino-sarcoma (?) in a child of two years is reported by Rosenstein, and Ganghofner refers to a case of carcinoma of the uterus in a child of eight; both fatal.

Carpenter found record of twenty cases of sarcoma of the vagina in children under twelve years, and says vaginal sarcoma is usually seen as multiple polypi, sessile or pedunculated, of firm consistence, or even gelatinous. These polypi do not usually ulcerate; as a rule the inguinal and lumbar lymphatics are unaffected, the course of the disease is chronic, and the result fatal. The uterus and bladder may be invaded and present polypoid excrescences, likewise the rectovaginal or vesicovaginal septa, the connective tissue at either side of the vagina, or the broad ligaments may be attacked by the process. The rectum does not usually become involved. Extirpation, when no great extent of tissue has been invaded, has proven successful. Ligature of the polypi and scraping the vaginal mucous membrane appear to have been worse than useless, recurrence following these measures quickly, and valuable time has been thereby lost.

As an illustration of many successful operations for acute and chronic intussusception, reports of which are to be found in

the literature, the following is interpolated: Carpenter records the case of a male infant two months old whose abdomen was greatly distended, temperature 102.4° F., pulse 120, respiration 80. The mother said it was first noticed that the abdomen began to enlarge when the child was three weeks old, that it had steadily increased until two days before, when it rapidly became enormous. The bowels had moved scantily and only with great effort, and finally defecation became impossible. He diagnosed the case as one of chronic intussusception and advised immediate operation, giving the mother little hope of recovery. Chloroform was administered and abdominal incision made. The intestines were found so greatly distended that it was necessary to puncture them to allow the escape of gas and thus relieve pressure upon the obstruction. The intussusception was reduced without serious difficulty. The abdominal cavity was irrigated, the intestines replaced, a small wick of iodoform gauze introduced for drainage, and the incision closed. Recovery was uninterrupted, and the child was taken home ten days after operation, the wound having entirely healed and the bowels moving naturally.

As intimated at the outset, the writer in presenting this brief paper claims nothing from the standpoint of originality or scientific excellence, his chief aim being to emphasize the suggestions that:

1. By observing certain modifications in management and treatment even major surgery in the young should not necessarily be attended with greater operative mortality than that which follows similar measures in adult life.

2. Barring unforeseen and unpreventable surgical accidents the high death-rate which has hitherto been regarded as inevitable following operations upon the young may be largely reduced by the exercise of proper judgment in the application of modern scientific surgical and therapeutic principles.

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EXTRAUTERINE PREGNANCY.

BY W. J. MATHEWS, M.D., AUSTIN, TEXAS.

Ectopic is considered by many a more appropriate term than extrauterine, as ectopic signifies out of the normal place. In interstitial pregnancy the gestation sac occupies that part of the Fallopian tube which is embraced by uterine tissue, hence is not strictly speaking extrauterine.

Ectopic pregnancy is a comparatively rare condition. The proportion to normal pregnancy is estimated as from one in five hundred to one in ten thousand. Until recently the treatment of ectopic pregnancy constituted a dark chapter in abdominal surgery.

Pary, an eminent gynecologist and an able investigator in this very field before the pathology of this condition was understood, penned the following sad graphic picture: "A bleeding vessel through which the red stream of life is rushing away can be ligatured, a gangrenous limb which is destroying the possessor by sending its poisonous emanations to the remotest regions of the body can be amputated, a cancerous breast which is sapping the vitality of its victim hour by hour can be removed with prospect of temporary relief, an aneurism that places life in constant jeopardy can often be cured by proximal or distal ligation. Even phthisis counts its many cures. But here is an accident which may happen to any wife in the most useful period of her existence, which good authorities have said is never cured, and for which, even in this age when science and art boast of such high attainments, no remedy, either medical or surgical, has been tried with a single success."

Thus, in lawful and vivid language, is depicted the dark picture of the past, but, thanks to the onward resistless march of pathology and the glorious stride of surgery, I can present to you to-day a picture radiant with the glories of surgical triumphs in this field, bright as the other picture is dark with the gloom of failure and defeat.

Lawson Tait, between January, 1883, and July, 1888, operated on thirty-nine cases of ruptured ectopic pregnancy, and succeeded in saving thirty-seven of them. Writing of this condition he says: "I have never seen a case of suspected rupture or one in which we suspected intraperitoneal hemorrhage recover

if left alone." Reed, in his recent work, eulogizes Tait in the following beautiful language: "Lawson Tait, whose genius illumined the whole subject and established methods of cure that approached perfection. He elucidated the entire subject, classified its various types and phases, and formulated and demonstrated with the mind of a genius and the hand of a master therapeutic resources which have placed his name forever among the benefactors of science and humanity."

Ectopic pregnancy may be defined as the development of the fertilized ovum in any part of the generative tract outside of the cavity of the uterus. It is my belief that the uterus alone is the seat of normal conception, and that all extrauterine pregnancies must in their origin be tubal, and that abdominal pregnancy is the result of a primary or secondary rupture of tube. The development of the ovum in the tube inevitably results in the rupture of the tube from the twelfth to the fourteenth week, and sometimes much earlier.

The varieties of ectopic pregnancy, which are named according to the anatomical relations of the developing ovum, are as follows: Interstitial pregnancy is that variety where the ovum is developed in that part of the tube embedded in the structures of the uterine wall. In this situation rupture takes place early, from the third to the fourteenth week, and, according to Tait, always ruptures into the peritoneal cavity.

A number of cases of interstitial pregnancy have been reported as rupturing into the uterine cavity; no doubt most of these cases were erroneously reported and were really cornual pregnancies. Tait's conclusions are entirely based on postmortem examinations, museum specimens, and facts obtained at operations. Yet it is fair to state that some eminent authorities believe that the fetus may rupture into the uterus and be delivered in the natural way.

In the next variety the ovum is found in the middle free portion of the tube. It is called isthmic tubal pregnancy. The danger of rupture in this variety is very great, as the gestation sac is quite thin.

The most frequent variety is when the ovum develops in the outer third of the tube or ampulla. This is the widest part of the Fallopian tube, and hence we find ampullar pregnancies develop much beyond the earlier months of gestation. In this form tubal abortion may take place through the unclosed ostium abdominale into the peritoneal cavity before the eighth week, about which time the closure of the ostium abdominale takes

place. Rupture of tubal pregnancy may take place into the cavity of the broad ligament, or the growing ovum may stretch the lower portion of the tube, and by its bulk unfold the two leaves of the broad ligament without rupture of the tube. Tubal rupture into the broad ligament is safest for the woman, it being almost an impossibility for a fatal hemorrhage to take place into the cavity of the broad ligament, because this cavity, when distended to its utmost capacity, forms a limited space where a great accumulation of blood cannot take place. Again, the pressure of the folds of the broad ligament itself exercises strong pressure on the bleeding point and becomes a natural and powerful hemostatic. Tait holds that broad ligament pregnancies yield all the cases which go to full term, the lithopedian and all the cases which by secondary rupture of the ovum cyst get to be called abdominal pregnancies.

There are other varieties of ectopic pregnancy of considerable interest. For example, the ovum in an ampullar pregnancy sometimes protrudes out of the ampulla into the general peritoneal cavity, and we have a condition known as tubo-abdominal pregnancy. It also happens that sometimes the ovum in ampullar pregnancy protrudes into and partly develops in cystic portions of the ovary. This condition is probably caused by adhesions of the fimbriated extremity of the tube to the ovary at an early stage. This condition may be termed tubo-ovarian pregnancy.

Joseph Price has recently operated on a case in which he found a child at full term projecting on either side of the enlarged ovaries—one of the exceedingly few cases of ovarian pregnancy demonstrated by operation.

The existence of primary abdominal pregnancy is denied by the highest authorities. Tait affirms that a fecundated ovum dropping into the peritoneal cavity could never develop there, but would be rapidly digested. He goes further, and states that a gelatinous body, such as that of a three or four months' fetus, would also be digested in the peritoneal cavity. In this connection Leopold's experiments are most interesting. He placed canine fetuses in the peritoneal cavity of other animals. Breaking up and absorption of the fetuses occurred with great rapidity.

In one dog, in which was placed a fetus two and one-half centimeters in length, no trace of it was found after two days. In another case two fetuses were implanted in the peritoneal cavity, and the abdomen was opened on the fifteenth day. Nothing whatever was found save two small bodies the size of a lentil and fastened to the intestines by adhesions. Similar results

were obtained with older fetuses. The results of these experiments should certainly tend to stagger our faith in the existence of primary abdominal pregnancy.

Tubal pregnancy rupture into the peritoneal cavity is almost invariably fatal to the mother from excessive hemorrhages, and the death of the fetus is almost certain.

The formation of a decidua in tubal pregnancy is now admitted by all competent observers. The sac has an amnion and chorion, the same as in intrauterine pregnancy. The tubal ovum may rupture into the peritoneal cavity, its membranes remaining intact, the embryo continuing to develop until full term, the placenta still maintaining sufficient attachment to the mucous membrane of the ruptured Fallopian tube to keep up its blood-supply. When the fetus ruptures into the abdominal cavity without any membranous envelope, pathologists state that connective tissue proliferation about the ovum surrounds it with a vascular sac sometimes of considerable thickness. Jessop reports a case in which the fetus lived to full term in the peritoneal cavity without any membranous covering whatever. In this case Dr. Jessop opened the abdomen and found the condition as stated, and saved both mother and child.

Termination of Ectopic Pregnancies.—The embryo in extrauterine pregnancy, as a rule, is arrested in its development and dies. Even if it goes to full term it must perish, unless the aid of surgery comes to its rescue. A few cases of interstitial pregnancy have been reported as rupturing into the uterus and terminating in a natural labor, with safety to the mother. At an early period after rupture the embryo may be entirely absorbed, but after the fourth or fifth month it cannot be absorbed, but it may undergo fatty degeneration, into adipocere, mummification, or calcification, becoming a lithopedion. These embryos thus changed have remained quiescent in the abdominal cavity for thirty, forty, or fifty years, the woman maintaining fair health. Yet a dead fetus, though it may remain quiescent in the abdominal cavity many years, may yet become septic and kill the woman. The sac may become septic, suppuration set up, and the pus work its way to the surface by various routes, maybe into the bowel, the vagina, bladder, or through the abdominal wall, the bones of the embryo making their way to the surface through suppurating fistulous tracks. Then, again, as already stated, the fetus may go on developing to full term, either as an extraperitoneal or intraperitoneal pregnancy.

Symptoms and Diagnosis.—First, symptoms and diagnosis

before rupture of tube; second, at period of rupture; third, symptoms and diagnosis when pregnancy has reached full term, child living.

First. Lawson Tait says that the symptoms of ectopic pregnancy before rupture are exceedingly misleading and the diagnosis almost impossible. He states that the large bulk of his patients had no suspicion that they were pregnant at all, and that therefore the first factor of interest in a correct diagnosis was absent. The woman may enjoy her usual health up to the time of rupture, nothing particularly occurring to warn her of her true condition. The last thing these women would admit would be pregnancy. Then, again, that a large proportion of these victims have never been pregnant, or have not been pregnant for many years, shows how misleading the whole history may be. Most works on gynecology previous to rupture give three cardinal symptoms: (1) Disturbance of menstruation; (2) sharp pains, usually accompanied with faintness; (3) the presence of a mass adjacent to and connected with the uterus.

When a woman who has never been pregnant, or has not been pregnant for a number of years, misses one menstrual period and has morning sickness, and in two or three weeks a little blood from the vagina stains her napkin, these slight hemorrhages not occurring at the regular menstrual period, and a few shreds of decidual membrane are found in the vaginal discharges, and if, in addition to these menstrual disturbances, a vaginal examination detects a mass to one side of the uterus or behind it; if, moreover, the patient suffers from recurrent unilateral pains—sharp, tearing pains; above all, if we introduce a probe into the uterus and find it a normal depth, or, better still, if we dilate the cervix and introduce a finger into the uterus and find it empty, our diagnosis could not be doubtful. Tait says the diagnosis of tubal pregnancy at time of rupture into the peritoneal cavity may be made with certainty seven times out of eight, and may be guessed at in the eighth instance.

Second. The diagnosis of primary intraperitoneal rupture into the peritoneal cavity is the diagnosis of intra-abdominal hemorrhage. This is the most dreadful accident that can befall a pregnant woman. Many die within a few hours after rupture. Without warning, in the noonday of a useful life, probably in her usual health, she is seized with excruciating pains in her abdomen, and in a few minutes she is pulseless. The pallor of death steals over her prostrate form, and in a few hours she may

be a corpse, if prompt and well-directed surgical treatment does not snatch her from the very jaws of death. Everything is against the unfortunate woman; the unresisting structures of the abdomen cannot stem the rapidly flowing vital stream. The peritoneal cavity is capacious enough to contain all of the blood in her arteries and veins. Besides, the blood is slower to coagulate in the peritoneal cavity than elsewhere. The diagnosis of this form of rupture depends more upon the symptoms than on any examination of the abdomen. Even when the intra-abdominal hemorrhage is enormous, the chief reliance must be placed upon the general condition of shock and collapse, as the presence of blood can seldom be demonstrated by fluctuation, abdominal palpation, or bimanual examination. Deep pressure, though, frequently elicits general exquisite abdominal tenderness.

A tubal pregnancy rupturing into the cavity of the broad ligament has not the appalling and dreadful symptoms of intraperitoneal rupture. The intraligamentous space is limited and a fatal hemorrhage is almost impossible. A secondary rupture of a broad ligament pregnancy may take place into the peritoneal cavity and be accompanied by a hemorrhage as severe as a primary rupture, and may produce the same symptoms and require the same treatment.

Tubal pregnancy rupture into the broad ligament is indicated by sudden and severe pain, generally unilateral, and faintness. The pain is generally quite severe, but the collapse is much less extreme than in an intraperitoneal rupture. In a fairly large extraperitoneal hematocele, a tumor can always be felt above the brim of the pelvis, and a rectal examination will find the bowel completely blocked by the pressure of the hematocele. These are two of the most important signs of extraperitoneal hematocele, and are never found in intraperitoneal effusion of blood.

Third. Normal intrauterine pregnancy is not always easily diagnosed. To differentiate between a large ovarian tumor and normal pregnancy is sometimes puzzling, but to differentiate between an intrauterine and extrauterine pregnancy is a very difficult matter, and sometimes impossible without dilatation of the cervix and a digital exploration of the uterus.

Lusk, in his late work on obstetrics, says: "Twice within a year to my knowledge the abdomen has been opened in this city for supposed extrauterine pregnancy, and only an ordinary pregnancy was found." Extrauterine pregnancy has been mistaken

for intrauterine pregnancy by two of the most eminent French physicians, Tarnier and Depaul. One of the main points of diagnosis given by authors is the ease with which the fetal parts may be felt. They reason that as the fetus is immediately behind the abdominal wall and outside of the uterus, it should be easy to demonstrate the abnormal location of the fetus. Than this nothing could be more misleading. In extrauterine pregnancy the fetal sac is sometimes as thick as the walls of the uterus, and the abdominal parietes may also be very thick, and in such a condition a diagnosis would be impossible. Again, in normal pregnancy the uterus may be extremely thin and the abdominal walls may also be attenuated, and here is where mistakes in diagnosis are frequently made. Lawson Tait states that eight well-educated British surgeons brought eight cases to him which they supposed to be extrauterine pregnancy, and every one of them proved to be normal pregnancies, and Tait could scarcely convince them of the fact. They were deceived by the thinness of the abdominal and uterine walls.

The next strongest point of diagnosis given by authors is that the pregnant sac is unilateral. This is true of the early months of pregnancy, but when pregnancy has advanced to the seventh or eighth month the uterine tumor occupies a central position and probably could not be distinguished from normal pregnancy. Judging from my own case, which went to term, the character of the labor attracted my attention more than anything else, and the great prostration accompanying the pain. I first noticed that the pains were not like the normal rhythmical intermittent pains of natural labor. In fact, I noticed no intermittency in the pains, but just seemingly one long, continuous, agonizing pain. Nor do I think we should expect to encounter intermittent rhythmical pains, such as we meet in normal labor. Uterine contractions are governed and maintained by a motor center in the medulla oblongata, and it may be doubted whether this motor center has any influence or action over a pregnant sac outside of the uterine cavity, or whether regular rhythmical intermittent contractions can take place outside of the uterus. Indeed, the exact seat of the pains in extrauterine pregnancy is a debated question. Many authorities are of the opinion that the pains are entirely associated with contractions of the uterus, while others think that the contractions occur in the gestation sac. The opinions of authorities on this point are very confusing. The gestation sac in those cases that have gone on to full term

consists mainly of fibrous tissue, the muscle being small in amount and irregularly scattered throughout the sac wall. Besides, many muscular bands are ruptured during the expansion of the tube, and as the ovum enlarges the great stretching and pressure the muscle is subjected to would be almost sure to cause its complete absorption. From these considerations I would be strongly inclined to believe that in a full-term extrauterine pregnancy there would be scarcely any muscular structures in the sac, and therefore we ought not to expect intermittent muscular contractions in the sac, but severe, continuous pain from excessive distention of the sac, and perhaps violent movements of the fetus. Therefore, if I would emphasize or accentuate one symptom of ectopic pregnancy more than another, it would be the character of the pains accompanying the labor, and the collapsed condition present. But when all has been said, dilatation of the cervix and exploration of the uterus with the finger, or even with the entire hand, is the only method of diagnosis worth considering except the history of the case.

Surgical Treatment.—First, before tubal rupture; second, after tubal rupture, (*a*) into the peritoneal cavity, (*b*) into the broad ligament. Before the tenth or twelfth week of extrauterine tubal gestation all English authorities assert that a diagnosis is impossible. But if a diagnosis could be made, the pregnant tube should be removed. Such an operation would be conservative in the highest degree and for the best interests of the ill-fated woman. Her physician and friends, and the unhappy woman herself, would be relieved of the dreadful anxiety of an expected rupture and perhaps a fatal hemorrhage.

Second (*a*): The surgical treatment of extrauterine intraperitoneal rupture is the surgical treatment of intra-abdominal hemorrhage. The cardinal principle in surgery of cutting down on the bleeding vessel and ligating it applies with tremendous force here. No operation in surgery tries the coolness, the courage, and the resources of the surgeon more than this one. Suddenly we are called to see a woman in a profound shock, possibly in collapse, and in such a condition we have to operate immediately. Every minute, every moment, the shock is becoming more profound from internal hemorrhage. To delay operation simply means intensification of the shock. The woman will die if not operated on. The rapid opening of the peritoneal cavity could not add much to the shock, and by this means alone can we check the hemorrhage.

Therefore, every consideration impels us to operate immediately even in the presence of shock.

Open rapidly the abdomen. Spend no time in removing clots, but with one or more fingers seize the tube and ovary and bring them up to the abdominal wound. Apply clamps to the broad ligament, one at the side of the uterus, including the tube and ovarian arteries, and the other clamp to the outer side of the tube at the pelvic brim; these clamps are removed afterward without applying ligatures, if it is decided to preserve the tube, and the torn vessels are ligatured at the point of rupture. But if the tube is much damaged, ligatures are applied and the tube and ovary are removed. If shock is very profound, the peritoneal cavity should be irrigated with hot normal salt solution. This procedure will not only tend to lessen the general oozing and cleanse the peritoneal cavity of clots of blood, but will also tend to lessen shock. The normal salt solution should be injected hot into the cellular tissue of the breast or back. If the operation has been aseptic, no drainage will be required. If a septic abscess has been opened during the operation, a glass drainage-tube should be left in the wound for forty-eight hours, otherwise the abdominal wound is closed up immediately by the most approved methods. This operation gives the most brilliant results of surgery.

Second (*b*): Of this particular rupture Tait says that in a great majority of cases of extraperitoneal hematocele, the result of ectopic pregnancy, the disease may generally be left alone, being rarely fatal, and should be interfered with only when suppuration or extreme hemorrhage has occurred. Generally the ovum dies, the effused blood is absorbed, and the patient regains good health. If the hematocele becomes septic and suppuration occurs, the pus must be evacuated. Some recommend puncturing the suppurating sac through the vagina. Tait prefers an abdominal section for dealing with pelvic abscesses. But after rupturing into the broad ligament the fetus may continue to develop, and a second rupture may take place into the peritoneal cavity, and a fatal hemorrhage may occur at any moment. To avoid such a calamity the most experienced surgeons advise removal of the ovum in the interest of the woman. If the gestation has not advanced beyond the fourth month, the place of incision is the usual median one. Expert operators would remove the entire sac; in some cases the sac could only be removed with the uterus. This would be a formidable and dangerous

operation for the occasional operator. The safest operation for the doctor not doing much surgical work would be the following: After the ordinary median abdominal incision down to the sac, it is opened, the placenta and membranes are stripped from the sac, and the raw cavity may be closed from below upward by a long continuous catgut suture. The upper part of the sac may be removed and the edges carefully turned in so that the suture brings their peritoneal surfaces together. If the placental adhesions are very firm, extensively separating the adhesions might cause a fatal hemorrhage. In such a case we should leave the placenta in the sac and plug it firmly with iodoform gauze. In about five or six days the gauze should be removed and the placenta extracted, which can generally be done safely at this time without hemorrhage. The danger of sepsis is, of course, great as long as the placenta remains in the sac. But the frail bark is sailing between Scylla and Charybdis. If, on the one hand, the placenta is forcibly removed the woman will die from hemorrhage, whilst, on the other hand, if the placenta is not removed she is in constant danger of septic poisoning. Therefore we have to choose between two evils. I believe leaving the placenta in the sac when the adhesions are dense and extensive is the lesser evil, because we can usually guard against and prevent sepsis, but the most expert surgeon cannot always prevent a fatal hemorrhage while separating firm and extensive adhesions.

From the fifth month up to full term the median incision should not be used, but the abdomen should be opened in the side, because the enormous growth of the extraperitoneal gestation has so stripped the peritoneum from its normal relations that by making an incision in the side the sac can be opened, without entering the peritoneal cavity. In many broad ligament pregnancies a secondary rupture does not take place, and the gestation remains to term subperitoneal, and as it ascends upward into the abdomen the peritoneum is gradually stripped from the abdominal parietes and viscera. The peritoneum is frequently raised up out of the pelvis, entirely from the bladder, from the posterior surface and from the upper part of the anterior surface of the uterus. In one case Berry Hart showed a frozen section in which the peritoneum was stripped from the anterior abdominal wall for a distance of seven and three-fourth inches above the pelvic brim. This is an important point to remember when operating, as this stripping up of the peritoneum enables the operator to make the incision in the side and open the gestation

sac without entering the peritoneal cavity, a possibility of the greatest importance to both the operator and the patient.

Child Living at Term.—All surgeons are not agreed as to the surgical treatment of extrauterine pregnancy at full term. Some surgeons prefer to let the fetus die before operating in the interest of the mother, regarding the life of the fetus as of no importance compared with that of the mother. Other surgeons regard both lives of equal value, and endeavor to save both by operation. One well-known gynecologist puts it thus: "Should I operate and possibly save the life of a child, which at best will stand few chances of surviving, and by so doing greatly add to the danger of the unfortunate mother, or should I delay the operation and thus permit the child to die and the placenta to lose very much of its vascularity, if, indeed, not all of it, and by this delay very much enhance the chances of recovery of the woman?" If the child is alive at full term, Lawson Tait favors immediate operation. To use his own language: "I, therefore, advocate the principle of saving a child who has survived the catastrophe of the primary rupture of the tube by being extruded into the broad ligament." In another sentence he says: "If the child is still alive, and near the full term, I believe it to be our duty to operate." I pin my faith to Tait's teaching.

REPORT OF CASES.

Case 1.—I was invited by Dr. Beaty, of Manchaca, to see a case giving the following history: The patient was aged thirty-five. About ten years before she gave birth to a healthy full-term child, enjoying excellent health up to the present pregnancy. She became pregnant about five months before this first visit. She had suffered no more pain than in former pregnancies. For a month or more she had chills and fever, but no hemorrhage from uterus and no fainting spells. She showed me a running sore which she said would not heal. I passed an ordinary uterine probe into the suppurating sinus, about six inches downward from the navel. The next morning I operated, and carefully laid open the fistulous track until I reached the cavity, from which I removed a three or four months' fetal skeleton. I think the cavity I reached was in the broad ligament. I packed the cavity with iodoform gauze, and in a few weeks she was well.

Case 2.—Mrs. A., an artist, thirty-five years of age, of German birth, a well-developed woman. Eight years intervened between her last pregnancy and this one. She had often been

treated during these years for endometritis. She had two normal pregnancies before the present one.

She was six months pregnant when I first met her, and gave me the following history: She enjoyed good health for the first four months, when she was absolutely free from pain, nor did her menses return during this time. She knew no difference between this pregnancy and her other two up to the end of the fourth month, when she was suddenly seized with violent pains in the lower part of her abdomen, and rapidly passed into a state of collapse. She fainted and fell on the floor of her room in an unconscious condition, where a few minutes later her husband found her lying. She was so weak that she had to be lifted into bed, where she remained for two weeks, at which time she left her bed and did not return to it, though still quite feeble, but at the end of a month she had regained her usual health. I think at this period she had a tubal rupture into the broad ligament, with considerable hemorrhage. Her health remained good up to the end of the sixth month, when she was again attacked with violent pains and fell into a collapsed condition, but not as profound as her former attack. It was during this attack I first met her. She was suffering great agony and was very weak. I injected hypodermically the fourth of a grain of morphine and the thirtieth of a grain of strychnine, and in a short time she was fairly comfortable. In twenty-four hours she was well over the attack. I believe at this time she was suffering from nervous shock without rupture or hemorrhage. Dr. Bennett, of this city, saw her with me in this attack. The terrible pain and shock suggested the thought of extrauterine pregnancy, and we even discussed the probability of such a condition. But we were by no means specially committed to such a diagnosis. I saw no more of her until her labor pains commenced at full term, when her husband again sent for me. I went to see the case, somewhat worried over the past history of my patient, and my anxiety was not lessened by her appearance. She was becoming rapidly exhausted, although her pains began only thirty minutes before I first saw her. The pains were different from any I had ever witnessed. They did not intermit, and were more intense than ordinary labor pains. The pains seemed like one long continuous agonizing pain, and she was rapidly approaching the point of collapse. I became quite alarmed about her strange symptoms. I at once told her husband that I considered his wife in a serious condition, and that I wanted consultation. In a few minutes Dr. J. W. McLaughlin arrived.

I told him I was in doubt as to the exact condition of my patient, and that I wanted to make an exact diagnosis. Dr. McLaughlin put her thoroughly under the influence of chloroform, and I at once made a careful vaginal examination. After introducing my finger I found the os in a patulous condition, so much so that I easily introduced my index-finger within the cervix. I continued introducing one finger after another until all my fingers were within the cervix, and in a short time I was able to introduce my whole hand into the uterus. The uterus was just large enough to lodge my hand. There was nothing in the uterus but my hand, and now I was absolutely certain that I had to deal with an extrauterine pregnancy. I at once made arrangements with Dr. McLaughlin to meet me again in one hour, as that would give me time to select and sterilize my instruments. While my office girl was boiling the instruments, I took from my library Tait's latest work on abdominal surgery, and read the chapter on extrauterine pregnancy. As a result of my reading I came to the conclusion that I had to deal with a broad ligament pregnancy unruptured. I posted myself as to how the peritoneum stripped from the abdominal parietes, and the proper place to make my incision, without which knowledge I would have been completely at sea. Faithfully following the rules laid down by Tait, I made an incision well down on the right side of the abdomen, and dissected carefully down until I exposed the back of the fetus. I then cautiously yet expeditiously extracted the child and handed it to Dr. Frank McLaughlin, who kindly assisted me in the operation. As I reached the child to him to my great joy it screamed lustily. The Doctor very kindly and patiently gave the baby his entire attention.

And now came the serious question as to what disposition we should make of the placenta. Tait's advice was to leave it in the sac, if extensive adhesions existed. In this case the adhesions were very firm and very extensive. Indeed, the placenta was spread all over the pelvis. It was the unanimous advice of all the physicians present to leave the placenta in the sac. The edges of the sac were stitched to the edge of the abdominal wound, which was packed with iodoform gauze, a twist of which was brought outside of the abdominal wound to maintain drainage. The cord was also cut on a level with the external incision. An abundance of sterile gauze was placed over the front of the abdomen, and the toilet of the wound was completed after the most approved method.

As stated, the unfortunate woman was suffering from shock when the operation began. The operation, which was very rapidly done and was an easy one, did not seem to increase the shock. But in spite of the best care and the strictest antiseptic precautions she died on the second day after the operation. Her temperature only reached 100°. I believe she died from the effects of shock and not from sepsis. She never had a chill, and a post-mortem examination failed to discover a drop of pus. I believe this case was a broad ligament pregnancy, and that our diagnosis was correct, judging from the fact that at no time during the operation did either bowel or omentum appear in the wound. At the post-mortem I removed the entire gestation sac, and sent it down to the pathologist of the medical department of the State University for examination, but to my everlasting regret it was lost in that laboratory. The child is still living and in good health. It is now seven years old, a beautiful, well-developed child—indeed, a child of unusual beauty and brightness. I regret very much not being able to save the life of the mother, but I am conscious of the fact that I did my very best to do so. I employed the very best surgical help I could obtain. I am happy in the belief that the mother would certainly have died in a few hours whether I operated or not. I also feel happy in the belief that without operation two lives were doomed, and that by operating I saved one precious life.

Palermo, it seems, has strong ideas on the advantages of municipal ownership and trading. Some three or four years ago, dissatisfied with the high price of bread, the city authorities, after a referendum to the population, established municipal bakeries, which were decidedly successful, enabling the loaf to be sold without loss at a considerably lower price than formerly. With a wisdom which might well be imitated in our own country the slaughter-houses were also taken over, and a referendum shortly to be applied will probably end in the gas-works passing into the management of the corporation. The most novel idea, however, was the municipalization of funerals and cemeteries, which it was lately sought to establish. In this the innovators had to fight against vested interests and the competition of the cemetery of S. Orsola, belonging to a religious confraternity; the opposition proved too strong for them, and the civic authorities were defeated after long and expensive litigation.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE INFLUENCE OF CLOTHES.

The stragglers of the little army of medical men that recently invaded Boston had an opportunity of witnessing a formidable demonstration of the forces of Christian science. It is worth while to consider seriously the strength and weakness of this comparatively new factor in the complicated balance of power in which our own profession is included.

The superficial observer, or the close observer who inspects surface conditions as thoroughly as he sounds for internal lesions, must have been impressed with several distinct contrasts between the attendance at the meeting of the American Medical Association and the Christian science delegations. Among these may be noted the greater attendance of the latter, not only absolutely but relatively, the obviously greater enthusiasm, even amounting to fanaticism, of the latter, the greater preponderance of women, and the superficial appearance of greater wealth, better clothing, and greater familiarity with what may be termed parlor tricks, on the part of the latter. About 4700 physicians were registered at the Boston meeting, and there were undoubtedly over 5000 in actual attendance, say two per cent of the entire profession. The Christian scientists have been estimated as high as 50,000, and while only a relatively small number of physicians came from any one town, many of the Christian science delegations were quite large, and one congregation was said to have been represented in its entirety.

The difference in enthusiasm between the two gatherings is, of course, readily explained. There is nothing particularly exciting in a gathering of a well-established and sober-minded profession. On the other hand, the novelty of a semireligious, semi-

medical cult, subjected to a mild sort of twentieth century martyrdom which is glorious and very safe, and the epoch-making incident of the dedication of a magnificent and costly temple, naturally increased the zealotry of the gathering.

We must recognize the force of character which has enabled one woman, of no great scholastic education nor scientific attainment, to create a numerous sect of sophists, and to estimate at its true value the influence of this large, well-dressed—one is tempted to say well-gowned, but there was a considerable sprinkling of men—and good-mannered body. The temple itself, costing upward of two million dollars and representing skill and good taste as well as mere money, is also an argument of the most tangible kind, though, fortunately, rivaled if not eclipsed in the same city by the buildings of the Harvard School. One little occurrence during the stay of the Christian scientists also indicated the sincerity of its adherents. Forty-two of them were dumped from a sight-seeing automobile, some sustaining fractures. All but two refused medical aid, and one lady, taken to a hospital, insisted on being discharged, in spite of a fractured clavicle.

It is unnecessary, for our present purpose, to point out the subtle fallacies on which Christian science rests, but it may not be out of place to call attention to the fact that the clientele of this cult is essentially a leisure class. There is something in the mental discipline of labor that sharpens the faculty of detecting sophistry. The man or woman who works, with hands or brain, may draw false conclusions from false premises from sheer ignorance of facts and conditions. After half a lifetime of medical practice it is difficult to say just why there may not be a great medical "discovery" of some potent drug, just as one may discover that a certain plant makes superior fiber for rope or that a new mineral has peculiar and commercially important qualities. Likewise, we can scarcely explain to an impartial layman why he should buy furniture of a man whose advertisement covers half a page of newspaper and avoid the doctor who carries a few inches of standing advertisement, especially when the latter goes to church, pays his debts, is a medical graduate, and possessed of a good general education. Thus the intelligent layman may be misled as to all sorts of quackery on account of misconception of premises, but he will detect, if he cannot analyze, the flaw in the logic of Christian science.

In a figurative as well as a literal sense, Christian science is

the religion and the medical art of the well clad. Any ordinary gathering of devotees of this cult, or any similar one, can be referred to, with a sweeping gesture, as a refined and intelligent audience, largely because social poise, good clothes, and leisure are naturally associated with refinement and intelligence. Since the accumulated power which renders these things possible represents ultimate intelligence, cause and effect are likely to be confused. The mute argument to judge and jury, to legislature, and to potential convert of a well-clad body and mind is not to be lightly considered.

EDITORIAL NOTES.

Requirements of Success in Surgery.

In these days when every recent graduate in medicine is determined to become a surgeon whether or not he possess the proper qualifications, the essay of L. C. Bosher, recently published in the *Journal of the American Medical Association,* is of timely interest. Dr. Bosher says that the requirements for a successful surgical career are, first, a thorough natural fitness for the work; secondly, a thorough liberal education, including as much as possible of studies of a scientific nature, especially physics, biology, and chemistry, in the order named. Next, the very best available medical school should be selected, where a complete all-around medical education may be obtained. After completion of the medical course a term of hospital service is now considered an absolute essential, and if choice is possible it should be in a hospital where the cases are seen under the masters in the profession, and where the interne's time is divided into service in the medical and surgical wards, in the order named, if he wishes to become a surgeon. In such a one he can learn the methods of the masters and learn the responsibilities of a surgical assistant. Mere observation alone, however, will not suffice, but operations on the cadaver and on the lower animals are invaluable in acquiring technical skill without risk of human life. From the simpler operations on the patient the interne can gradually advance to those more difficult as his skill and judgment improve. The best advantages of hospital training are obtained by the interne who gives his full attention to his duties, and he will thus gain the confidence of his superiors and lead them to entrust work of greater importance into his

hands. After finishing the medical course and the hospital interneship, and perhaps also a term as surgical assistant, generally months and even years will elapse before a special surgical practice can be developed. This is an advantage rather than a drawback, as it favors the acquirement of the breadth of view which is sometimes notably absent in those who settle down too early into the practice of a specialty. In conclusion he refers to the other requirements, health, energy, honesty, temperate habits, attractive personality, and tact, here indispensable as in every other position in life. With these requisites one may count on a reasonable measure of success in the practice of surgery, and even the rare exceptions who are "born surgeons" would also be the better for them.

Beer and Athletics.

In the recent Olympian games held at Athens, in which amateur athletes from all parts of the world participated, this country and England returned the greatest number of winners. A German physician in a communication to one of the leading Berlin medical journals gives as a reason for the poor showing made by his countrymen in these games the inordinate use of beer. This instance is cited as another proof of the deleterious effect of beer-drinking on muscular capacity. This may have had some remote bearing on the subject, but as a rule those who are training for athletic events do not touch beer or other stimulants for months before they enter contests of strength and endurance.

Collier's Weekly and the Quacks.

Again is *Collier's Weekly* fighting the worst fraud of modern times. As a continuation of their series, "The Great American Fraud," in which they exposed the patent-medicine business, they are now publishing a series of articles on the quack doctor. The first article is entitled "The Sure-cure School," and the writer shows up the methods of the quacks who prey upon those suffering from cancer and tuberculosis. The proprietors of this journal cannot be too highly praised for this "muck-raking." They deserve the support of the whole medical profession. To fight and expose, with no assistance, the immense interests that compose the makers of patent medicines and the quack doctors requires courage of a high order.

ITEMS AND NOTES.

Dr. George Blumer has been appointed to the chair of the theory and practice of medicine in Yale University, to succeed the late Dr. John S. Ely.

Servian student statistics show that men in that country are dropping medicine, while women are turning to this profession for a livelihood.

The Philippine Island Board of Health reports 2683 lepers in the archipelago, scattered through the various provinces. Cebu, which has 675, heads the list, but only one province is wholly free from the disease.

The Japanese government has conferred the honorary title of Professor of Medicine on Miss Tada Urata, who some years ago graduated as a doctor of medicine at Marburg, being the first Japanese lady to obtain that degree in Germany.

The Æsculapian Society of the Wabash Valley held its fifty-ninth semiannual meeting at Robinson, Ill., May 31, 1906. Dr. H. N. Rafferty, of Robinson, Ill., was elected secretary and treasurer, to fill the vacancy occasioned by the death of Dr. H. McKennan, of Paris, Ill.

A recent investigation of the fruit and candy shops by the Bacteriological Department of the Board of Health at Los Angeles, Cal., revealed, says an exchange, the presence of so many bacteria conveyed to them by the wind that legislation has been asked for requiring of dealers that such articles be exhibited for sale under glass.

The increasing prevalence of typhus fever in Mexico has stimulated research into its etiology and mode of transmission. Several announcements regarding the discovery of a specific organism have been made, and the government has offered prizes aggregating $50,000 for the discovery of the germ and means of prophylaxis and treatment.

Sir Frederick Treves in delivering an appeal for contributions to the London hospitals from the pulpit of Union Chapel at Islington on "Hospital Sunday," said that the amount of pain relieved could be roughly gauged by the quantity of morphine

consumed at the hospitals. One-sixth of a grain would relieve pain for an hour. By this test 87,000 hours of pain—that is, practically ten years—were avoided in one London hospital alone in 1905.

THE following have been elected to deliver the annual orations before the American Medical Association at the meeting in Atlantic City in 1907: Oration on Surgery, Dr. William H. Wathen, of Louisville, Ky.; Oration on Medicine, Dr. James Herrick, of Chicago, Ill.; Oration on State Medicine, Dr. Samuel G. Dixon, of Philadelphia, Pa.

THE course of Lane Medical Lectures of the Cooper Medical College of San Francisco, commencing August 20, 1906, and continuing two lectures daily during the five days of the week, will be given by Dr. John C. McVail, M.D., D.P.H., of Glasgow, Scotland. The subjects of the lectures will be "Practical Hygiene, Epidemics, and Preventive Medicine."

AT the ninth annual meeting of the American Gastroenterological Association, held at Boston, Mass., June 4 and 5, 1906, the following officers were elected for the ensuing year: President, Dr. H. W. Bettmann, of Cincinnati; first vice-president, Dr. Julius Friedenwald, of Baltimore; second vice-president, Dr. F. H. Murdoch, of Pittsburg; secretary and treasurer, Dr. Charles D. Aaron, of Detroit.

AT a meeting of physicians and surgeons of Grand Rapids, on June 11, a committee was appointed to formulate a plan of action looking toward the organization of a new and independent State medical society. The new organization will be independent of the American Medical Association. The committee is composed of Drs. Perry Schurtz, J. B. Griswold, J. Kirkland, Charles E. Hooker, and Henry Hulst.

AT a special meeting of the Council of the Chicago Medical Society, recently held, President C. S. Bacon was instructed to appoint a committee of three pathologists to coöperate with the committees appointed by the Chicago Commercial Association and the Illinois Manufacturers' Association in the proposed investigation of the stock-yards. In response to the request contained in a recent letter written by Health Commissioner Whalen the specific object of the committee will be, says an exchange, to determine whether carcasses affected with localized tuberculosis are fitting food after the diseased parts are cut out.

A NEW operating theater and a lying-in ward have been recently provided at the Russian Hospital in Constantinople at a cost of 400 Turkish liras. The operating theater has been equipped with all the latest requirements of modern medical science, and new surgical instruments have been ordered from France. The lying-in ward is intended only for poor women who are Russian subjects, and at present contains only three beds, but there is a prospect of this number being increased.

DURING the taking of the census at Diki-Djafer, a locality situated in the district of the Sultan-Yeri, Turkey, the age of a Mussulman farmer named Mehemmed Agha was given as 103 years. He is in full possession of all his physical powers and his teeth are good. He had two wives, and his descendants amount at present to 79 persons, all living in the villages of the locality named. During the feast of Bairam he walks on foot to the mosque of a village situated many miles away from his place of abode.

THE second annual conference of the International Congress for the Promotion of Hygiene and Salubrity in Dwellings is to be held in Geneva, Switzerland, September 4 to 10, 1906. The purpose the promoters of the congress have in view is to appeal to the most competent professional men of all countries—to doctors, hygienists, and architects—to deliberate in common on the problem of how best to ameliorate the salubrity of dwellings. The general secretary is M. Albert Wuarim, 1 Rue des Moulins, Geneva, Switzerland.

DEPUTY-CONSUL-GENERAL MCLEAN of Yokohama has published a statement intended to discourage any emigration of American physicians to Japan. The consul says that the foreign community of less than three thousand persons is already well supplied with European and American physicians, and that the Japanese prefer medical men of their own nationality. All practicing physicians in Japan are required to have government licenses, and it takes a foreigner about six months to obtain one, even if his credentials are good.

THE Pasteur Institute at Tunis has begun to publish archives; the first number contains a general account of the institution and its work. It began in 1893 as a viticulture laboratory only, but has grown steadily in the supply of vaccine for all Tunisia, and in general clinical research work. It also supplies serums of all

varieties if required. A good deal of original research is being carried on within its walls by M. Nicolle and three assistants, the principal subject of investigation being ferments. Altogether since the work was taken up 1695 presumed cases of human rabies have been treated, with a death-rate of 0.29 per cent.

THE Ottoman government has decided to build a medical school at Salonica. The inspector-general of the Roumelian provinces has already been enabled to secure the necessary initial funds, amounting to about 4000 Turkish liras, which will be contributed partly by the Ministry of Public Instruction and partly by different municipalities. This medical school is intended to be erected on the same working principles as the one existing at Damascus, which latter has been asked to furnish its plans and working scheme. This is another proof of the progress which scientific medicine has made of late in the Ottoman Empire.

A SPECIAL session of the California legislature, made necessary, says the *Medical Record*, by the catastrophe at San Francisco, enacted these laws of interest to the profession: A bill appropriating $25,000 for the building of temporary houses for the insane while permanent buildings can be put up to replace those of the Agnew State Insane Asylum at San José, destroyed by the earthquake; three bills providing for the reproduction of the registers of the State Boards of Examiners in Medicine, Pharmacy, and Dentistry; a bill providing for the issuing of duplicate certificates to physicians, pharmacists, and dentists who lost the original papers in the fire at San Francisco; a bill appropriating $83,800 for the University of California, about $8500 of which is to restore the buildings and apparatus damaged in the medical and veterinary departments; a bill appropriating $2500 for the restoration of the property of the State Board of Pharmacy, and a bill of equal amount to restore the property of the State Board of Medical Examiners.

MEASURES for bettering the condition of the dwellings of the poor by the provision of cheap and healthy lodgings at a low cost have been long contemplated by the municipal government of Vienna. In certain districts of the city the slums are to be pulled down, and the municipality and government have consented to levy no tax at all within the next twenty years on the buildings to be erected on these sites, if they are built so as to provide accommodation for small families at a cost of not more than

about 1s. per room per week. As ground is rather cheap in this district, and the possibility of a large number of inhabitants is very considerable, several landowners have already taken advantage of the good chance offered to them. For a later period a taxation is warranted for these houses, which will be calculated in such a way as to leave a net income of at least 4½ per cent on the capital invested in the buildings. The opening of playgrounds for children, of gardens, and baths for the use of the population of the districts at a very low cost, has been left in the hands of the local authorities.

The report of Sir Allan Perry, principal medical officer of Ceylon, which has just been issued, contains, says the *Journal of the American Medical Association,* an interesting account of the medical condition of the island in 1904. The chief infectious diseases were cholera (7 cases and 4 deaths); smallpox (10 cases and 2 deaths); malaria (5288 cases and 75 deaths); typhoid fever (341 cases and 70 deaths). Compared with the previous year, malaria was the only disease that showed an increase. The cases of cholera did not originate in the island, but were brought by a steamer. In regard to leprosy, Dr. Rost's "leprolin" serum was used with satisfactory results in three cases. Perhaps the most interesting feature of the report is the fact that Sir Allan Perry, unlike the great majority of colonial physicians, is a follower of Mr. Hutchinson in the belief that parangi or yaws is syphilis. He has instructed his officers to treat the cases more vigorously with antisyphilitic measures. The report of Dr. Aldo Castellani, who it may be remembered discovered the trypanosome of sleeping sickness, is of particular value. He has carried out much bacteriologic work on the island. For dysentery and paradysentery he has prepared a polyvalent vaccine, which is harmless. The blood of an inoculated person agglutinates the bacillus dysentericus of Kruse in from twenty-four to forty-eight hours after inoculation. The immunization passes off in a few weeks. Dr. Castellani has determined the presence of three forms of dysentery. He finds that ipecacuanha has no effect on the amebic variety.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Mesenteric Diverticulitis.

H. C. Gardiner and John A. Sampson (*Journal of the American Medical Association,* May 26, 1906) publish the report of a case of intestinal obstruction due to an inflamed intramesenteric diverticulum of the small intestine, in which the puckering and thickening of the mesentery caused an angular bending of the gut with the result mentioned. They discuss the general subject of such diverticula, and conclude that they occur more frequently in the small intestine than the autopsy records would indicate, and may frequently have been the cause of minor symptoms, sometimes may even have endangered life, without the true cause of the trouble being recognized. They are usually multiple, and may involve large areas of the intestine. They consist of hernial protrusions of the mucosa and submucosa through a weakened place in the intestinal wall, usually alongside of the blood-vessels at the mesenteric border, and push between the two folds of the mesentery. This location renders them less liable to pathologic changes than if they hung free or were attached to the abdominal wall, and the semifluid contents of the small intestine also render them less a menace than similar formations of the large intestine. In case they become inflamed a mesenteritis is likely to occur, with possible results as in the case reported. Their multiple character and the fact that they are commonly intimately associated with the larger blood-vessels render them ill adapted to safe operative procedures. When operative treatment is indicated it must be adapted to the special needs of the case. Acquired diverticula of the large intestine occur at weakened points in any part of its circumference, and their occurrence on the free border and the harder contents make them more productive of disturbance; a number of cases have been reported. The difficulty of diagnosing the strictures and inflammatory tumors from this cause from cancer and the fact that intestinal diverticula are a frequent source of vesico-intestinal fistulæ are mentioned as of especial interest. The authors suggest that these diverticula receive more attention.

Skin-grafting.

J. E. Cannaday (*Journal of the American Medical Association,* June 2, 1906) uses bidaily dressings of gauze, wet with chloral hydrate solution (2 grains to the ounce), and protected with oiled silk, as a preliminary for obtaining a clean granulating surface. When ready to graft, he freshens the granulated surface with a nail-brush, which he prefers to the curette. He uses Thiersch grafts, taken by preference from the patient. The grafts are shaved by a sawing motion, one-half the thickness of the skin and one-half inch by one and a half inches in size. As soon as cut they are turned over the left index-finger, skin side next the finger, and carried directly to the denuded site and pressed down on its surface, the edges being smoothed off with a probe. The process is repeated till the area is covered. He believes this direct transplantation better than the intervention of any saline or other solution, which makes the operation more difficult and less certain. He covers the grafted site with thin dental rubber dam, crisscrossed for drainage if the area is large. Over this he places a small gauze pad, anchored with zinc oxide adhesive plaster, and externally a cotton gauze and bandage dressing. Some method of immobilization may be desirable, and if the grafting is done on a limb he keeps it on the level of the body, or a little elevated. Slight pressure will keep the grafts in place and prevent serum and accumulation or bleeding; too much pressure kills the grafts. He has now used this method in twenty-three cases, chiefly burns and lacerated wounds, without a single complete failure.

The Etiology and Treatment of Oblique Inguinal Hernia.

R. W. Murray (*British Medical Journal,* June 16, 1906) says that all the evidence that we possess is in favor of the view that the main factor in the causation of oblique inguinal hernia at all periods of life is the presence of a preformed sac, a patent funicular process, and that whether the bowel will or will not enter this funicular process depends primarily upon the size of the opening at the internal abdominal ring, and secondarily upon the strength of the muscles guarding it.

As a rule, the only satisfactory way of treating a hernia is by means of an operation, and, other things being equal, the earlier in life the operation is performed the better.

The essential point in the operation is to so completely obliterate the sac as to render the peritoneal surface at this level free from any dimpling or depression. In order to insure this the inguinal canal must be opened up and a ligature applied to the sac at the level of the internal abdominal ring. The divided aponeurosis of the external oblique should be subsequently united by overlapping, for the inguinal canal is thus narrowed, lengthened, and its original obliquity restored.

Foreign Bodies in the Bronchi.

Thos. A. Claytor (*American Medicine,* March 17, 1906) gives a full description of the topography of the bronchi and tabulates 50 cases not heretofore brought together. Of the 50 cases, 38 subjects recovered and 12 died, a death-rate of 24 per cent. Of 33 patients operated upon, 28 recovered and 5 died; while of 17 not operated upon, 10 recovered and 7 died. Dr. Claytor discusses the symptoms under the following headings: cough, hemoptysis, fever, pain, dyspnea. The most characteristic of the possible results of the presence of a foreign body in a bronchus is an atelectatic area. There is weakness or absence of respiratory sounds on the affected side and exaggerated breathing on the sound side. The Roentgen ray should always be tried as an aid to diagnosis. Pneumonia is almost always a certain result, and hence gangrene and abscess are natural consequences. Pleurisy is not common. Bronchiectasis may result from more or less obstruction of a bronchus. The treatment is considered under the heads: (1) Position; (2) operation; (3) expectant. In the vast majority of cases operation is indicated.

Congenital Tumors of the Groin.

R. H. Russell (*Annals of Surgery,* May, 1906) summarizes by stating that the congenital origin of the femoral hernial sac is shown by (1) its composition, especially by the presence of a thick fibrofatty covering containing a quantity of unstriped muscular fiber; (2) by the various positions it assumes, especially in passing upward upon the abdomen; (3) by various other clinical characteristics. The femoral sac is formed in the embryonic state by the inclusion of a diverticulum from the primitive pleuroperitoneal cavity with its mesoblastic wall.

MEDICINE.

The Roentgen Rays in Medicine.

E. v. Leyden *(British Medical Journal,* May 12, 1906*)* gives a summary of the results obtained by the use of the *x*-rays in medicine, as distinguished from surgery. For the exact determination of the extent of lesions of bones and joints in the limbs in such complaints as gout, osteoarthritis, and gonorrheal arthritis, the value of the rays is obvious. Moreover, this important means of diagnosis and treatment is becoming more and more used by physicians in dealing with diseases of the thoracic and abdominal organs. In heart disease the size and position of the organ are visible, and dilatations of the aorta, as well as the actual aneurisms, can be detected; also in the smaller arteries not accessible to the touch, such as the posterior tibial, degenerative changes with calcification, such as lead to and accompany senile gangrene, may be demonstrated. In the lungs the *x*-rays show the position and extent of tuberculous disease, and this, according to the author, often earlier than the physical signs. Tumors, abscesses, foreign bodies, the boundaries of pleuritic exudations, the presence of thickening or consolidation of normal tissues, and the extent of the diaphragmatic movements may also be revealed by the examination of the thorax. Air in the pleural cavity gives a characteristic appearance. In the abdomen stones can be recognized in the gall-bladder, the kidneys, ureters, and urinary bladder, and the outlines of tumors made clear. The boundaries, and in some cases even the movements of the stomach and intestines, can also be seen when salts of bismuth have been administered with the object of coating the walls of these viscera with a layer of material impermeable to the rays.

Special stress is laid by v. Leyden on the value of this means of diagnosis in diseases of the spine and spinal cord, and several cases are quoted. For instance, a woman of twenty-six years had been treated for over a year for syphilitic myelitis without beneficial result. An examination with the *x*-rays showed a carious process involving the eighth and ninth dorsal vertebræ, and the tuberculous nature of this was further demonstrated by a positive reaction with tuberculin. In another case presenting the symptoms of atrophic bulbar paralysis the third and fourth

cervical vertebræ were seen to be collapsed upon one another. Decalcification of the vertebræ can also be detected, and of course growths. As regards treatment, in addition to certain skin diseases, promising results have been obtained in leukemia.

Heart Failure as the Result of Deficient Food.

Alexander Haig (*Medical Record,* May 26, 1906) says that he has seen many instances in which deficient nourishment has led directly or indirectly to more or less marked heart failure. If there is a condition of slow, steady, and constant deficiency of food there comes a time when not only do the less important tissues suffer, but the heart, muscles, and brain cells begin to suffer with them to some extent. The signs of heart failure are perfectly definite and distinct, and those who know how to look for them can scarcely miss them. The writer, in relating the history of cases of this nature, points out the three chief objects of treatment, which are: the diminishing of the work of the heart, the increase of its nourishment, and for a time the administration of a tonic. In practice he gives all adults who consult him nine grains of albumin a day for each pound of body weight. He declares that although this is only a rough guide, it is decidedly better than none. He also watches the temperature of the body, the condition of the blood, the ratio of the capillary reflux to blood-pressure, and the other circulatory signs, and looks upon these taken together as safe and certain guides to a condition of satisfactory nourishment and nutrition.

Unjustifiable Negligence in the Diagnosis of Pulmonary Tuberculosis.

M. E. Street (*Charlotte Medical Journal,* June, 1906) says that consumption is an infectious disease. At the commencement of the disease consumption is curable. It is the physician's duty to diagnose consumption while it is curable. The physician who fails to make a diagnosis during the earliest stages is guilty of unjustifiable neglect. The medical profession should no longer neglect a subject of such vast importance as the early diagnosis of pulmonary tuberculosis. The people should be taught the necessity of an early diagnosis of consumption; an early diagnosis means a chance for recovery, a late diagnosis means death. On account of the great prevalence of tuberculosis, and

the incalculable importance of an early diagnosis, and the general neglect of the subject of an early diagnosis by the text-book authors, the medical colleges, and the medical profession, the State board of examiners should require every candidate for license to practice medicine to pass, in addition to all other requirements, a satisfactory examination on the symptoms and evidence of early tuberculous involvement of the lungs.

The Transmission of Rabies by Scratches.

At the meeting of the Paris Biological Society held in May, M. Remlinger (*Lancet,* June 16, 1906), director of the Imperial Bacteriological Institute at Constantinople, described three cases which showed that rabies might occur not only as a result of bites or the licking of superficial wounds, but also as the result of scratches inflicted by the animal. Some animals were in the habit of licking their paws, and the investigations of Roux and Nocard have shown that the saliva possessed virulent properties several days before the appearance of the first symptoms of rabies. When the disease had declared itself a new factor was introduced. Froth fell from the mouth of the animal and lodged on its feet and claws, especially when it was either confined in a small place or tied up. In the scratches made by a dog or cat numerous nerve filaments were laid bare, and the virus in this way had access to them. Persons scratched by an animal either known or suspected to be rabid ought therefore to be advised to undergo treatment by Pasteur's method with the least possible loss of time.

Prophylaxis of Gastric Hemorrhage.

Boaz (*Deutsche med. Wochenschrift,* 18, 1906) urges the systematic examination of the feces for occult blood, as he says it is always the forerunner of hemorrhage. The presence of occult blood is the alarm signal and calls for immediate measures. The patient must stay in bed until the feces are free from blood. A milk diet is indicated. In the graver cases ice to the epigastric region and rectal injections of a 10- to 20-per-cent solution of calcium chloride should be given. In order to detect the blood he mixes the feces with a little water and adds glacial acetic acid; this solution is poured off and shaken out with ether, or the mixed feces may be shaken out with ether and the ethereal

solution separated. This ethereal solution is treated with a little fresh tincture of guaiac and a few drops of hydrogen peroxide, when if blood be present there is a blue line at the junction of the two liquids.

A Case of Empyema and Bronchopneumonia Due to Appendicitis.

M. E. Rist (*Archives of Pediatrics,* June, 1906) reports the case of a girl of four years, who on the fourth day of an attack of appendicitis, which had subsided under rest and liquid diet, developed a bronchopneumonia of the upper right lobe. Subsequently the pneumonic process extended to the lower third of the left lung. Pulmonary tissue was found in the sputum, and the child vomited repeatedly about a dessertspoonful of extremely fetid pus. Examination of the child revealed a gangrenous focus in the right apex, and an empyema of the left side. This was verified by operation. Twenty days later the child died of a generalized bronchitis and sepsis.

Guillemot, Halle, and others have called attention to the severity of these appendicular infections. They are due to anaerobic bacteria, which always produce putrefaction and gangrene.

Alcohol as a Nutrient.

Rosenfeldt (*Centralblatt für Innere Med.,* No. 12, 1906) comes to the following conclusions as a result of experiments made on students: That alcohol has no deleterious effect on the metabolism of the body, and that albumen and sugar are conserved by its use. The intelligence is decreased 25 per cent, even though there are no symptoms of intoxication; there is also a reduction of muscular power. The heart's action is increased, and the heart is irritated; its reserve force is markedly impaired.

Outlook for the Chronic Dyspeptic.

Mark Knapp (*American Medicine,* March 10, 1906) asserts that the outlook for the chronic dyspeptic is of the brightest. The disease may be due to organacidia gastrica, which he considers under three heads: Organacidia gastrica simplex, produced by the ingestion of large quantities of organic acids; gastrosia fungosa, due to mold growth in the stomach; and zymosia

gastrica, due to the growth of yeast in the stomach. Insufficientia pylori, due to a gradual weakening of the pyloric sphincter, is also cited as a very frequent cause of the disease. Organacidia enterica is given as the third cause of chronic dyspepsia, and this the author discusses under the following heads: Acute organacidia enterica, acute enterosia fungosa, chronic organacidia enterica, and chronic membranous enterosia fungosa.

THERAPEUTICS.

Treatment of Aneurism by Direct Gradual Arterial Closure.

The advantages of utilizing the method of active clot formation for the cure of aneurism are pleaded by R. T. Stratton (*Journal of the American Medical Association,* March 10, 1906), who points out that it is the natural method when spontaneous cure occurs, and also that by which the best results have been obtained in the surgical treatment of the condition. He reports in detail a case of aortic aneurism thus treated by a constrictor applied above the sac and gradually tightened. The patient did well for nearly two days, and then rapidly failed, with sensory and motor paralysis of the lower limbs, and died on the second day after the operation. The autopsy showed that the constriction had been applied above the celiac axis, the aneurism extending above that branch; the death was attributed to inhibition of the functions of the abdominal viscera by the final withdrawal of the blood-supply. There was no perceptible evidence of injury of the vessel at the point of constriction, and the sac was fairly well filled with a stratified clot of the active type, in spite of the short time that had elapsed.

Notwithstanding the fatal outcome of this case Stratton considers that it warrants a hopeful future for this method. The ease with which the constriction was borne by the patient, the formation of a large mass of laminated coagulum, the apparent maintenance up to the last closure of the lumen of the arterial branches arising within the sac and distributed to the vital organs, and especially the freedom of the aorta itself from evidence of traumatism, inflammation, or necrosis, all form the basis of a belief that this method will be available for many cases of otherwise hopeless aneurismal disease. Its chief field of usefulness will undoubtedly be found in cases of aneurism of the

abdominal aorta, where ligation is almost necessarily fatal and other methods are either impracticable or still more dangerous. He points out, nevertheless, still other conditions in which he thinks it will be of value and preferable to the ligature. The advantages of gradual occlusion over ligation in cases in which arterial branches supplying vital organs arise from the sac are obvious.

Injections of Alcohol in Convulsive Spasms of the Face.

At a recent meeting of the Paris Neurological Society, M. Lévy and M. Baudouin (*Lancet,* May 26, 1906) showed a patient whom they had treated according to the method of Schloesser. The patient had suffered for two and a half years from unilateral facial spasm which was never entirely absent, and which would sometimes awake him from sleep. Two injections of alcohol of 70 degrees each were made through the stylomastoid foramen, injection being followed by a transient facial paralysis which lasted for ten minutes after the first injection, and for some hours after the second. Since the operation, which was carried out more than a month previously, the patient has been perfectly free from his trouble.

The Treatment of Hemoptysis.

P. Petijean (*British Medical Journal,* June 2, 1906) believes from the results of his laboratory experiments and clinical experience that nitrite of amyl is the most useful pulmonary hemostatic; its action is always rapid and certain and its toxicity is little. The researches showed that the useful dose varies from three to nine drops by inhalation; that the latent period is short, from half a minute to three minutes; that no pulmonary vasodilatation succeeds the vasoconstriction; that no case of fatal poisoning occurred; and that the hemostatic action resulted either in the early congestive stage, or at the period of cavity formation. In the laboratory a curarized dog was kept alive by artificial respiration. The fall of arterial pressure in the greater circulation was first noted. The color of the lungs was observed before and after an injection of nitrite of amyl. After the injection the normal rose color gave way to a white anemic tint, beginning in patches, which extended and coalesced so as to involve the whole parenchyma of the lung. This action lasted for about eight minutes, and was so marked that if a deep section of the lung

were made at the time of the injection at the end of the latent period, the bleeding ceased almost as if a ligature had been applied. A trocar placed in the pulmonary artery so as to give a pressure tracing showed a marked rise of blood-pressure after the injection, a rise which was maintained for ten minutes. It is not pretended that amyl nitrite is a certain specific for hemoptysis. It is admitted, for instance, that in cases in which the hemorrhage is due to pulmonary congestion caused by enlargement of the right side of the heart, digitalis is likely to give a better and more permanent result; but Petijean believes his experiments have shown enough to give amyl nitrite the first place among the vasomotor drugs in hemoptysis.

Preventive Use of Antitetanus Serum.

A. Pergol (*British Medical Journal,* June 9, 1906) considers that injections of antitetanic serum should be used in all cases of wounds which have come into contact with the soil, or which have been caused by firearms, or which are from any cause liable to become infected with the tetanus bacillus. He has collected thirty cases in which it has been so employed as a prophylactic measure, and finds that the results obtained warrant its further use. He employed a serum prepared at the Pasteur Institute; he gives a dose of 10 to 40 cubic centimeters, according to the extent and condition of the lesion. It is not possible to assert that these cases would have developed tetanus had they not been submitted to the preventive treatment, but similar cases which are not so treated tend to develop it; patients feel no constitutional disturbance from the use of the injection. He refers also to two persons brought to the hospital with tetanus already developed, and in whom the cure was attributed to the serum treatment.

After a careful analysis of his case he concludes that the mortality due to tetanus has been greatly reduced by the introduction of serum therapy, which shows its full value best in prolonged cases. The longer the period of incubation is, the more favorable will the prognosis be. After the malady has declared itself, he advocates the use of strong, repeated doses, and points out the preventive value of the injections when the wounds are unclean. Intracerebral and intravenous injections have no advantage over those given subcutaneously. He thinks that by the general use of antitetanic serum as a prophylactic the disease might become stamped out.

GYNECOLOGY AND OBSTETRICS.

Teratoma Peritonei, with Wide Dissemination.

A. Fleischmann (*British Gynecological Journal,* February, 1906) reports the following case: A young woman was found to have many intraperitoneal tumors, the largest of which lay behind the great omentum, and the greatest number of them were removed by operation. From some small nodules of new growth on parts of the peritoneum which were not in view during the operation, and were therefore left, and in places which had been thoroughly examined and then found free from new growth, large tumors developed, and by their rapid and enormous growth led to the patient's death three and a half months after the operation. On microscopic examination the large tumors and the encumbrances on the two ovaries were found to be of the same structure, a tangled conglomeration of the derivatives from all three embryonal layers. Small nodules on the serosa of the anterior abdominal wall, a knob on the upper surface of the liver, and miliary nodules lying in plenty between the triple embryonal encumbrances on the ovaries, were convincing evidence that all were derived from the same kind of tissue. Such a condition, exclusively teratoid in nature, without the presence of any malignant transformation of the primary tumor, is extremely rare.

What is the Climacterium?

Samuel W. Bandler (*Medical Record,* Feb. 10, 1906) thinks it important to mention the fact that the menopause is generally considered an essential evidence of the climacterium. He states that this is not true. Another erroneous but common view is that after hysterectomy the annoying symptoms of the climacterium are absent if the ovaries be left behind. In point of fact, annoyances of the same nature often combined with scanty menstruation and with the other evidences of ovarian insufficiency are often seen in women who have not been operated upon, in women at the menopause, or during the climacterium, and even in women who are not near the menopause age. The writer thinks that we are justified in considering the relative oversecretion of the thyroid in these patients as the pathological basis. According to Welles, the close relation between the thyroid and

the reproductive function is beyond question. The writer concludes by saying that the probabilities are that ovarian insufficiency means relative hyperthyroidism. At least, even if the theory of relative hyperthyroidism is not correct, the fact that the annoying nervous symptoms in these patients are due to ovarian insufficiency is certainly unquestionable. The symptoms of diminished ovarian secretion and those of hyperthyroidism are enough alike to warrant the opinion that they are one and the same.

Sarcomatous Degeneration of a Uterine Fibroid.

L. Boursier (*British Gynecological Journal,* February, 1906) reports the following case: A woman, aged sixty-one, suffering from persistent uterine hemorrhages, was supposed from the examination of the débris brought away by the curette to be suffering from hemorrhagic metritis, but the bleeding recurring and persisting after the curettage, and the recognition of a small tumor and her age, suggested that she might have an epithelioma of the body of the womb. Total abdominal hysterectomy was performed, and she made a good recovery. An ovoid tumor larger than a turkey's egg was found projecting from the posterior wall of the uterine cavity. It appeared to be completely encapsuled, like an ordinary uterine myoma, and to have undergone a peculiar softening; on section it was of a grayish color. Histological examination proved it to be a fibromyoma which had undergone sarcomatous degeneration.

Age at First Menstruation.

Essen-Moller (*Centralblatt für Gynäkologie,* 15, 1906) in order to complete a series of observations made in other countries has gathered the following statistics from 5000 women of different social classes in Sweden: Menstruation appeared at the age of ten in .08 per cent, at eleven in .74 per cent, at twelve in 4.44 per cent, at thirteen in 9.3 per cent, at fourteen in 21.1 per cent. at fifteen in 26.38 per cent, at sixteen in 16.6 per cent, at 17 in 9.98 per cent, at eighteen in 6.48 per cent, at nineteen in 2.8 per cent, at twenty in 1.68 per cent, at twenty-one in .26 per cent, at twenty-two in .1 per cent, and at twenty-three in .06 per cent.

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ORIGINAL CONTRIBUTIONS.

THE TREATMENT OF ACUTE INSANITIES.

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The study of insanity is gradually receiving the recognition it richly deserves. There never was a time in the history of the progress of medical science when its importance was more keenly felt by all classes of society than the present. It is only a short time since its study was confined to a few members of our profession, who devoted their sole time and attention to its care and management. But to-day there is a radical change taking place, which is manifested by a growing desire on the part of not only physicians, but also the more intelligent laity, to know something concerning its true nature and character, and the former superstition and ignorance which associated shame and disgrace with mental disease is rapidly giving way to more enlightened views. While we hail with delight this great step in advance, yet we are constantly reminded that much still remains to be done before we arrive at that state of perfection which is our duty and privilege. It is only when insanity is brought to our own door, or afflicts those of our friends or relations whom we dearly love, that the full force of its dreadful consequences is truly appreciated, and we awake, possibly for the first time, to a complete consciousness of our responsible duties as medical advisers. That the teaching of this most important branch of medicine has in the past been sadly neglected by the faculties of our medical colleges no one will deny, but the medical students of our day have no excuse to offer if they fail to demand of the college they attend a practical didactic or, what is better, a clinical course of instruction in this valuable department of medicine. Even the medical faculties of our State insane asylums have also in the past wholly ignored the trust imposed upon them by our profession, by failing to furnish us in the form of text-books, clinics,

and reports of cases the results of their vast experience with the vagaries of the insane, as well as its proper care and treatment. But to-day scarcely any institution of any importance of this kind in America is regarded as complete without its psychologic or pathologic laboratory under the able direction of a duly appointed skilled pathologist, and the results of their work so far published are certainly very creditable and instructive.

In making provision for the insane we should not overlook the fact that there are two great general classes or divisions, viz.: (1) the acute, and (2) the chronic. Respecting the first, there exists in a greater or less degree the expectation of a cure; in regard to the second the chance of recovery is reduced to a bare possibility. To this latter or chronic class belongs the great mass of insane now under treatment, and variously estimated at from four-fifths to seven-eighths of the whole. It is the purpose of this paper, however, to call attention to the principles that govern the treatment of the acute or presumably curable forms of insanity, believing their study to be of more practical importance to the general practitioner than the more chronic classes. If insanity is an expression of some derangement of function or structure of the brain, or both of these elements combined, by virtue of which the normal mental attributes of an individual are so affected as to lessen his power of controlling his thought, speech, and conduct, then it would seem that, clinically speaking, the symptoms are the most essential elements for the physician to correctly interpret, for these are simply nothing more or less than the outward expression of some functional or structural change of the various bodily organs. Now in the study of acute insanities we find that the chief symptoms naturally divide themselves into three great classes, viz.:

1. Those which present every gradation of mental depression or depressed state of feeling.

2. Those which present all degrees of mental exaltation or hilarious excitement.

3. Those which present differing degrees of mental weakness.

On analysis it will be observed that these represent the most common types of insanity, viz., melancholia, mania, and dementia. In general medical practice the physician is called upon to recognize and classify these common types, as well as their anomalies. Under the first class belong the melancholias, under the second the maniacal states, and under the third the dementias. This classification also includes paranoia, paresis, and acute epi-

lepsy, for these are simply modifications or anomalous forms of these primary states. A primary question, and one fraught with great responsibility to the future welfare of the patient, is the class to which he belongs, the acute or chronic. Formerly it was thought and believed by the best authorities that the patient's chance of recovery was excellent when the insanity had not been present more than six months. A larger and more extended observation and experience has reduced this recent or curable stage, so that to-day the experienced alienist is very cautious in offering a favorable prognosis where the duration of insanity is greater than two, or at latest three, months. The transition from the curable to the incurable state is often so very rapid and insidious that the opportunity for recovery is often sacrificed by dilly-dallying methods of procedure, especially in the incipient stage. All authorities without an exception agree that insanity in its recent or incipient stage is most curable. The prospects of recovery, therefore, largely depend upon what is done within the first three months from its onset. Another problem that early confronts the physician relates to the proper disposition of the patient. As it now stands, there are four recognized avenues open for his selection (or perhaps I should say the friends of the patient, or even the patient himself), as, unfortunately, this important matter is too often left to their decision instead of the family physician:

1. The first pertains to the treatment of the patient at his own residence.

2. The second by sending him to a general or city hospital.

3. The third by his removal to a private sanitarium.

Now, the choice of either of these varies considerably in cost and relative curative merit, and is largely governed by two factors, viz., the financial ability of the patient, and secondly, the failure on the part of the family physician or friends to realize the true relative merit of each. After many years of observation and experience I am compelled to look with disfavor on the treatment of the patient at his own home, especially in the acute stage. It must be quite evident to all that the principles of treatment which are considered important in all hospitals are difficult of application in a private house, and more especially is this true of the insane. Surrounded, as they often are, by anxious friends and curious neighbors, as well as the commotion which their presence and that of the patient necessarily cause, it is difficult for the physician to apply the proper principles of treatment with any hope of success. Almost the same objections apply to the

general or city hospital. The constant going and coming of so many physicians, surgeons, and laymen, the general effect of the knowledge of daily surgical operations, and the lack of suitable quarters for the insane, render the average general hospital unsuitable for their care and treatment.

The commitment of the patient to the State insane hospital also has objections, but as a rule they are more imaginary than real. It has for some time been my conviction, however, that the environments of a State insane hospital are not the best for the mild and acute forms of insanity. My experience proves that what is most needed for them is a thoroughly sane atmosphere, surrounded with cheerful companions, homelike comforts, and the peaceful quiet which only a small hospital or sanitarium can furnish. The large number of chronic insane, with all their attendant circumstances, crowded for the most part in limited quarters, renders necessary environment almost an impossibility at the asylum, and results in producing mental impressions that are disastrous to the future welfare of those afflicted with the more simple and acute forms of insanity. Moreover, another serious objection to State asylum care for such patients is the great expense necessarily incurred in their proper care and management. Of all insane patients, those who are the most expensive to properly provide for are the acute and simple forms. Time forbids quotations from numerous authorities to support this view, but the unwritten law of equality which is so jealously guarded by every American citizen prevents the toleration of special privileges in State asylums at public expense. The immense number of patients compels the utmost economy of administration, and the superintendent who undertakes to disregard this rule is speedily dispensed with, for the constant cry of the average politician and those whom he largely depends upon for his position is to cut down expenses, and the superintendent who is expert in this is usually the one in demand. But the chief objection, and that which is the most difficult to overcome, is the prevalent but mistaken notion that in committing a patient to the asylum we are branding him with a stigma of disgrace that can never be overcome. Theorize or philosophize as we may against its absurdity, the fact remains that the false notion exists, and has become deeply fixed in the minds of not only the laity, but also many physicians. Hence many a curable case of insanity is deprived of early hospital care because of certain superstitious beliefs concerning such hospitals which the centuries have failed so far to efface. With all its objections and hindrances, the med-

ical faculties of our asylums deserve great credit for the numerous recoveries which take place under their care, even under such great disadvantages.

Of all the avenues open to the physician, however, that which offers the least objection is the selection of a sanitarium for the treatment of his patient. The practical advantages to be gained by small hospitals of this kind are so numerous and convincing that the leading alienists are now recommending them to supersede the old but well-established larger institution for the treatment of acute insanity. In a late address before the conference of "charities and corrections" in New York City, Dr. Letchworth, president of the conference, said: "Past experience, it appears to me, has demonstrated that large mixed institutions are not effective agencies in the cure of insanity. In many particulars the requirements of the acute insane are more exacting than those of the chronic. These include special structural arrangements, very close medical attention, a large corps of specially qualified attendants, and a prescribed diet. If a standard of care suitable to the necessities of the acute insane is adopted by a large institution receiving both acute and chronic cases, it is necessarily expensive for the chronic insane, it is insufficient for the acute insane; and it has been found difficult to counteract the tendency toward a uniform standard of care for both classes under the same administration. It seems to be necessary that every State should provide sufficient accommodation for its acute insane in small hospitals, where, under influences favoring restoration to health, recent cases could be made the subject of close study by skilful alienists, and where every possible means would be brought into requisition to effect cure, the ever-recurring question of expense being a secondary consideration. Only in this way can we expect to lessen the steadily increasing volume of hopeless insanity."

Time forbids further enlargement; suffice it to say that the trend of modern thought among alienists and those who devote their time and attention to the care and treatment of the insane are now unanimously agreed that small hospitals or sanitariums offer the best opportunities for the curability of recent or acute insanity. Every State should, therefore, provide small hospitals for the exclusive care and treatment of the acute insane. In the States that have already made such provisions the results are most flattering. Admitting that a correct diagnosis of acute insanity has been made, there are certain general principles that should early be applied in the treatment, which vary in their

rigid enforcement only to suit each special type or class. As no two persons are exactly alike, so no two cases are alike; hence it is impossible to lay down any cast-iron rules to govern all cases. Individualized treatment is called for in insanity as imperatively as in the case of acute forms of other physical disease, and much tact, skill, and practical experience are often required in its successful management. The general principles, however, which govern the treatment of acute insanity and which vary in their enforcement, as before remarked, only to suit the special type, can be arranged under the following heads: (1) Moral persuasion; (2) hygienic measures; (3) use of drugs; (4) special diet; (5) mechanical appliances; (6) surgery; (7) prophylaxis.

Moral Persuasion.—The underlying principle in the moral treatment of the insane is that the patient should be treated as a reasoning being. From the moment he comes under medical care it should be assumed that he will understand more or less correctly all that is said and done to and for him. He should, therefore, be treated as if you expected him to act rationally, even though apparently he has lost all appreciation of his surroundings, and if he should fail to understand, lead him gradually but persistently, by moral persuasion, to do what you expect him to do. At the same time the fact of his being mentally deranged and irresponsible should be borne in mind. In this connection provision must be made for the possibility of suicide, as this is the commonest of all serious complications liable to occur in the acute stage, more especially of melancholia, and this constitutes by far the larger number of all cases of acute insanity. All moral treatment should have for its highest aim the calling into normal exercise and use the rational part of the disordered mind. It should be assumed by both physician and nurse that the patient is capable, to some degree at least, of understanding the fact that he is ill, and our conduct toward him should frankly and consistently show this. It must also be remembered that the normal functions of the brain may be only temporarily deranged, and that in most cases some degree of normal function remains. It seems beyond the comprehension of many persons that insanity deranges, rather than destroys, the mind in its incipient stages. Much, therefore, depends upon our selection of a responsible nurse to carry out the principles herein enunciated.

Another important step is the *isolation* of the patient, whether treated at home or elsewhere; it is often with difficulty that the friends and relatives can be made to realize the necessity and importance of this measure. But those of us who have devoted

our time and attention to this study know too well that the probabilities of recovery are much increased when the patient is committed to the care of strangers. Moreover, the visiting of relatives and friends should be rigidly guarded. An injudicious remark in conversation will often do more harm than can be overcome in a month under the most able care and treatment. Similar restrictions apply to correspondence by letter. These should be subject to inspection and rigid censorship, and their appropriation left to the wise discretion of the physician. No amount of argument or sympathy on the part of friends to infringe on these important principles should be allowed, as they subserve the future best interests of the patient. Matches, knives, scissors, and similar articles are dangerous in the hands of those suffering from acute insanity, hence they should be placed out of reach, unless used under the direction of a trained nurse. It should ever be the aim of both physician and nurse to gain the full confidence of his patient, and when this is accomplished the enforcement of these rules and restrictions is made comparatively easy.

Hygienic Measures.—Equally important and necessary is the employment of hygienic measures. In the majority of cases moderate suitable outdoor daily exercise is indispensable for success. While it is true that absolute rest is indicated in a small percentage of cases, yet it should ever be borne in mind that outdoor air and exercise is the best hunger and sleep producer that can be employed, and without these often all other means fail. In a very limited number the rest and change that belong to a sea voyage is preferable, but as a general principle all forms of travel and rapid change of scene are contraindicated in the treatment of acute insanity. Unfortunately, however, it seems to be a very popular method of many physicians to advise travel; a greater mistake could not be made in the vast majority of cases. A wise and absolute change in habits and surroundings, with partial or complete rest from mental and physical labor, the judicious use of baths, pleasant and cheerful society, tempered with moderate and agreeable occupation and amusement of all kinds, are the chief features to be aimed at in the hygienic treatment of acute insanity. Electricity and massage are useful adjuvants in many cases, and their judicious use is often attended with beneficial results.

Use of Drugs.—We now pass to the consideration of the use of drugs. While it is true that certain medicines are indicated in the treatment, yet as a rule they play a secondary rôle. As the

causes, as well as the pathologic lesions, differ in acute insanity, so the selection of drugs varies to meet their special indications. It is now a well-established scientific fact that nearly all forms of insanity are preceded by melancholia. Guslain was the first alienist to elucidate this important feature, and of its correctness there can be little doubt. Recognizing this, the dictum of Clouston, viz., that "mental depression is the functional expression of convolutional malnutrition," points the way to the therapeutic indications in such cases. Medicines directed to the improvement of the circulation and nutrition, as well as the elimination of toxic products, are those chiefly indicated. Tonics of all kinds, and more especially iron, quinine, strychnine, the mineral acids, the vegetable bitters, stimulants, with cod-liver oil and malt, meet the former, while laxatives, more especially small doses of calomel repeated at varying intervals, alternated with a purgative water, given on an empty stomach, or phosphate of sodium in varying doses, often satisfactorily meet the latter indication. When the constipation is obstinate, a combination of fluid extract of cascara and senna, with aromatic syrup of rhubarb, used as a vehicle, has proven useful in my hands. These measures are also greatly aided by the systematic use of massage and copious draughts of water, besides regular habits of going to stool. The aloin compound pill has also proven efficacious, but quite often in the early stage nothing short of the judicious use of enemas, alternated with the more active cathartics, is necessary. For the insomnia, which is a very troublesome symptom in all forms of acute insanity, in spite of severe criticism to the contrary I know of no drug equal in all respects to the hydrate of chloral. In a recent able article by my friend, Dr. Burr, of Flint, Michigan, I find that his experience exactly corresponds with mine, when he says: "Although all my life I have heard of the chloral habit, and of chloral dependence, I have never encountered a case of it. I have never known its use to create a craving, or its withdrawal (when the nervous system was restored to the point to permit it) to be followed by sleeplessness attributable to the withdrawal. Its use is open to objection where there is feebleness of the heart, but even in such cases, where this is not extreme, its effects are happy, and cardiac depressions can frequently be counteracted by the use of quinine." A fifteen- or twenty-grain dose of chloral is as large as should be used at any one time. Sometimes to this a few minims of fluid extract of hyoscyamus or a teaspoonful of elixir valerianate of ammonia may be added. Bromides often prove a splendid substitute.

All things considered, I believe chloral the most reliable and satisfactory hypnotic we possess to-day, and when used with discriminating care it is not attended with the serious consequences generally supposed and believed. In this connection I do not desire to be understood as condemning the use of sulphonal, trional, or paraldehyde; all these have their place in the treatment of insomnia, and are exceedingly valuable, more especially in its less severe forms. In the more excited forms of insanity, such as attend mania, where there is marked motor restlessness and all degrees of violence, no drug takes the place of the hydrobromate of hyoscine, used hypodermically. Its use requires great care, and the maximum dose reached gradually. Moreover, its continued and persistent use is directly harmful, and it should only be employed as a temporary expedient. As a rule, drugs used for the purpose of subduing and quieting a patient are at best very depressing, and when used constantly, exceedingly harmful. To restrain muscular activity by the use of drugs is not curative or scientific, and not in accord with the best interests of the patient. The brain exhaustion and rapid nerve tissue combustion that attend their continued use cannot be compensated for by any such methods. After the excitable stage is over, the medicinal treatment of mania is similar in most respects to that of melancholia. Remedies which promote nutrition and support the vital functions will, in most cases, aid in allaying the extreme mental and physical excitement, and ward off the inevitable exhaustion that follows it, which is so dangerous to the life of the patient. As a general principle, all medicines that tend to lessen the appetite and impair digestion are contraindicated in the treatment of all forms of acute insanity. In demented states the chief indication is to prevent the rapid brain deterioration by measures addressed to the sustenance of the various bodily organs, hence the treatment is largely symptomatic.

Special Diet.—In all cases of acute insanity the measure of leading importance pertains to the proper nourishing of the patient. Blood-enriching tonics and fattening diet are the most potent remedies for the relief of all forms of morbid mental states. The nervous diathesis does not at best put on fat. We must, therefore, combat this tendency to malnutrition by scientific dieting. For this purpose milk and eggs constitute the sheet-anchor. They are best employed in the form of egg-nog, and should be used liberally, according to the urgency of the case. It is not uncommon for the physician and nurse to be hampered in the administration of food and medicines by failure of coöpera-

tion on the part of the patient. Where food, however, is persistently refused because of delusions or other causes, resort to rectal alimentation or mechanical feeding with the nasal or stomach tube is imperative. In meeting capricious and delicate appetites, gruel, custards, broths, beef tea, kumiss, jellies, malted milk, Mellin's food, and fruit will be found of great service. Liquid foods, as a rule, are more convenient in their administration besides more readily assimilated, especially in the early stages, but should be supplanted gradually by the liberal use of meat and vegetables, as the patient progresses toward convalescence.

Mechanical Appliances.—In the care and management of the insane, the enforcement of kind but firm discipline is essential for best results. It must ever be borne in mind that we have an irresponsible being to deal with; therefore we ourselves must do the reasoning until such time as our patient is mentally responsible. No class of cases require more tact and skill to properly manage than the more simple varieties of insanity, and the less they are removed from true sanity the more difficult the task. Every precaution must be taken to guard against suicide and homicide, for in many instances they will resort to every conceivable method to accomplish such a purpose. Many refuse to eat or take medicine in the hope of terminating their lives by starvation or thirst. The use of the stomach or nasal tube is therefore indicated. If they are obstinate and pugnacious, the temporary use of the strait-jacket is warrantable. In referring to this I am aware that many regard the use of mechanical restraint as cruel and unnecessary, but after many years of observation and practical experience with the insane I am compelled to state that I believe its judicious use to be not only necessary but humane. There is no question in medical psychology that has been more widely and specifically discussed than the use and abuse of mechanical restraints in the treatment of insanity. Some very prominent alienists have gone daft on the subject, and declare that they can treat all forms of insanity without its use. Equally as prominent, and perhaps more competent and reliable, authorities declare that the total abolition of mechanical restraints in its treatment is an absolute impossibility for best results, and use it freely in their practice. Between these two extremes the pendulum has been swinging for some time.

In this connection it affords me pleasure to quote from a recent paper of Dr. Runge, superintendent of the St. Louis Asylum, as follows: "The total abolition of mechanical restraint in

the insane hospital is an absolute impossibility. It must be used in some cases, and I desire to put myself on record as entirely out of sympathy with the hue and cry against it. It is fostered either by a spirit of cant or misguided sentimentality, and the real issue is lost sight of in either case. If I should place over the door of this institution the boastful device, 'No Mechanical Restraints Practiced Here,' or make the same device a text for a sermon in my annual report, I should, in justice to scientific exactness, give a detailed account of the manner of managing the following cases: A maniac who destroys nightly his mattresses, bedding, and clothes, all made of duck; a melancholiac with tendencies to aggravated self-flagellation; a person afflicted with traumatic insanity, whose frenzies at times are equal to that of the epileptic maniac; a senile or paralytic dement in his frequently so unbridled abuse toward his fellow sufferers; a patient afflicted with a surgical injury and uncontrollable desire to rid himself of the surgical dressing.

"If absolutely no mechanical restraint is employed, there is but one way of managing these and kindred cases, and that is by an unmerciful system of drugging. The problem simply resolves itself into a question of chemical against mechanical restraint, and I give the latter the palm of superiority without a moment's hesitation. My instruction to lighten or remove camisole, muffs, wristlets, or straps can be carried out when the proper time arrives, while the quieting dose, once administered, passes beyond my controlling will. Besides, in some cases of mania of an alcoholic etiology the patient will not be quieted by any amount of our most approved sedatives. Nothing short of a lethal dose of hydrobromic acid will allay the storm; this will effectually stop the exhausting ravings of the mind and muscles with the ceasing beatings of the heart. It would be interesting to know how many cases under the non-restraint system have found their way to untimely death through maniacal exhaustion. What measures are taken by the advocates of that system in the oft-crowded violent wards during the hours of the night, considering that the roster of employees presents but an absurdly small number of the night-watches? We must face the issue squarely, and not budge an inch to clamor.

"Mechanical restraint employed by means of padded or pliable appliances is to be looked upon as a blessing in disguise in treating some cases of mental aberration. These insane, at the time such restraint is called for, hardly appreciate the degrading effect of the procedure, and proper appliances preserve their vital

energy, of which they are great spendthrifts. The necessity for individual restraint should be minimized, but whenever called for it should be resorted to without flinching."

This, it seems to me, covers the question at issue, and certainly is not only good common sense, but practically humane.

Surgery.—Until recently the surgery of insanity received but little attention, but of late much has been done in this direction, with satisfactory results. Personally I have very little faith in the efficacy of surgery, if left until the insanity is matured. The time of its greatest usefulness is, therefore, in the incipient stage. As an illustration of what is being done in this department, I cannot do better than quote from a recent report of Dr. A. T. Hobbs, gynecologist to the London Insane Hospital in Ontario, Canada: "The operative work has just reached the end of its sixth year, during which time the work has been carried on in a systematic manner, but without much encouragement from the profession or the alienists in Canada. In the annual report on the asylums of Ontario just issued a summary is given of this work. During the year closed fifty-five of these cases have been operated on. Of these patients seventeen have recovered, sixteen have improved, none have died, and, so far as heard from, twenty-two of the cases are unimproved, mentally. It is fully expected that several of the sixteen improved will get quite well. During the period of this work at London, 286 female patients have been examined, generally under an anesthetic, and organic diseases have been found in some one or other of the pelvic organs in 243 of them. Only forty-three of the entire number subjected to an examination have been found free from pelvic diseases. A total of 564 diseased conditions were found in 226 patients. In the women's hall the average recovery rate, including cases improved, for the five years 1886-1890, calculated on the admissions, was 37.2 per cent; in the next five years, 1891-1895, it was 37.5 per cent. But in the next five years, during which the gynecological work was a factor—that is, 1896-1900—the recovery rate rose to 52.7 per cent." As a general principle, in all cases of recent insanity in females, especially if there be any evidence of uterine disease, the patient should be examined, and if disease is found to exist, it should be treated irrespective of the insanity.

Prophylaxis.—As insanity is a strictly physical disease, it comes eminently within the range of preventive medicine. No greater progress has been made during the present century in any department of philanthropy and science than in the direction of the better care of the insane. But a greater work remains to be

done, a work that is even greater than cure or kindly care. It is that of prevention. The great question before us to-day is not only what can be done for the insane, but how can we prevent insanity? We are all compelled to accept the science of prevention as a higher and greater power than the science of remedy. In order for this to be effective, it must necessarily reach back to the family life, the school life, and even nursery and cradle of the child. The science of prevention, therefore, must be looked for outside of the wards of a hospital. The general practitioner, of all others, says Dr. Mann, is in a position to check the sources of insanity at their very beginnings. By carefully directing the mental and physical life of a pregnant woman he may form the future mental complexion of the unborn child. He may watch over the child's brains during the early formative period of infancy and childhood, and so advise the parents that they may guide the children in the paths which lead to mental stability. He may recognize the insane or neurotic diathesis, and by intelligently recognizing that such a person is more liable than others to mental disease, may apply a wise culture to the erring emotions, and discipline to the conduct in the early years of life, while they are yet applicable, and the fearful heritage may oftentimes be avoided. Especially is the preventive aspect most important in the dieting, occupation, habits, education, and general careers of such persons. Too often an indifference is displayed by the family physician to give such advice and counsel as is necessary. Yet he is derelict in his duty if he fails to sound the alarm.

Another important feature which comes within the province of the family physician is to guard against a relapse in those who have already suffered from one or more attacks. From an extended amount of observation and experience in this direction I do not hesitate to affirm that many cases could be saved from the wards of an asylum were this law more fully understood and obeyed by both physician and the patient. I advise all my recovered patients to weigh themselves at least once a month. If there be the slightest loss from the normal standard I advise them to be on the alert, and not be satisfied until it be regained; a loss of a few pounds in weight may be the first real warning of the disease returning, even though they may feel as well as usual. In addition, I advise them to lead quiet, routine, systematic lives, taking regular periods of rest and repose, as well as much out-of-door air and exercise, interspersed with suitable employment of both mind and body. Self-control and prudence in observing the laws of health, watchfulness in avoiding excitement of all kinds,

and cultivation of right and just views of life, constitute the strongest security against the return of the dreadful malady. To sum up the whole matter, the treatment and prophylaxis of insanity consist in a proper recognition of known physiological, mental, and moral laws, which, when properly understood and obeyed, result not only in the highest development of the race, but in the highest type of civilization.

ANEURISM OF THE AORTA.

BY ROBERT H. BABCOCK, M.D., CHICAGO, ILL.

This man is fifty-three years of age, Irish, a laborer by occupation, and has been an inmate of the Cook County Hospital for the past seventeen months. He gives a rather meager history prior to his present illness. The family history is negative. As to personal history, he admits having had gonorrhea at the age of nineteen. He denies syphilis, and gives a history of no other important disease. He states that his present trouble began a little over two years ago with weakness and inability to work, associated with difficulty in breathing and pain. On inquiring more carefully into the nature of the symptoms, it was found that the dyspnea and pain were present only during exertion, and ceased with the cessation of effort. Pain was felt in the lateral aspect of both halves of the chest, and is described as having been a drawing together of the chest. After having suffered more or less for a year he was admitted to the Presbyterian Hospital, October, 1902, and was very ill with symptoms evidently due to stasis. He got better, left the hospital, and was admitted to Ward 8 of the Cook County Hospital the early part of December, 1902, and has remained there until the present time.

His condition on entering the hospital was very grave. He was edematous, and suffered from attacks of dyspnea which were evidently paroxysmal in nature, coming on with considerable frequency, recurring at short intervals, and lasting in some instances as long as two or three hours. He describes these as attacks of suffocation, which seemed to start in the lower zone of the thorax and extend up to the throat; during these attacks he felt as though he would suffocate. A description of these attacks suggests that they were due probably to irritation of the recurrent laryngeal nerve, and were of the nature first described by Dieulafoy, and of which illustrative cases have been reported by Dr. Preble. In time these attacks of dyspnea subsided and gave way to more per-

sistent shortness of breath, which, however, is not very urgent except on exertion. That suggests to my mind that in time the pressure upon the recurrent laryngeal nerve produced paralysis. In February, a year ago, patient had a febrile illness, with symptoms of bronchitis of rather short duration. In April, a year ago, he was again very ill with symptoms of great pressure, and suffered very much from dyspnea and insomnia, but after three or four weeks got better, and at the present time he is tolerably comfortable.

His present symptoms are chiefly those of dyspnea of effort, etc.; he no longer suffers from pain. Within the last two months or thereabouts he has noticed a change in his voice. It is husky, and, as you observe, his cough has taken on a peculiar character (patient coughed). It is a loud, rather brassy cough at times, although when I saw him last week his cough was quite toneless on that day. His gastrointestinal tract is not disturbed. He sleeps well; he has no elevation of temperature.

When we come to inspection of the chest there are some things that are quite noticeable. The first thing is some distention of the venules and veins on the upper portion of the left thorax, but not on the right side. Close inspection also shows prominence in the region of the right clavicle, and when looked at, especially from behind and downward, the clavicle seems to be lifted upward and forward with each cardiac pulsation; also there is observable a pulsation in the right infraclavicular region. The apex beat is situated downward and to the left, as has been shown by some marks on the skin, about the sixth interspace, and an inch or so outside the nipple line. There is some epigastric pulsation, but I do not know whether it is visible. Close inspection of the face does not show cyanosis or evidence of much pressure except in the eyes. The pupils were described to me this morning as noticeably small and reacting very feebly to light. This suggests pressure upon the cervical sympathetic, and partial paralysis of the sympathetic fibers distributed to the iris. Palpation confirms the results of inspection. One can appreciate with the hand this lifting of the right clavicle, and can also appreciate the strong pulsation in the neck which is visible above the clavicle, and can appreciate that that pulsation is separated from the clavicle by an interval in which one cannot feel any pulsation. This pulsating vessel is, therefore, the subclavian displaced upward. The apex beat is palpable, and rather feeble. There is no thrill. Epigastric pulsation is very plainly perceptible, and the liver is palpable down to a distance of three fingers below the costal arch. Bimanual

palpation detects a feeble pulsation in the aortic area below the right clavicle.

Palpation of the radial arteries is interesting, since it shows that in this case there is an inequality in the pulses. The pulse in the left wrist is much smaller and feebler than the right. Want of uniformity in the two pulses of the wrist does not of itself signify necessarily aortic aneurism, for there may be local causes for it. If the vessels away up the arm and in the neck are found correspondingly altered, then it becomes a strong corroborative symptom taken in connection with others. In this case it is found that not only is the left radial small and weak, but so also are the brachial, axillary, and subclavian. It is further noted that the pulse of the right wrist, which is of fair volume, is slightly collapsing, and a capillary pulse can be seen and felt in the fingers. The veins of the arm, as you see, are rather turgid. I note also the condition of the arterial coats; they are very stiff, a little bit nodular and tortuous, as is the condition in all of the arteries of the upper extremities. The percussion areas of dulness were detected and outlined this morning. The one up above here (indicating) starting to the left of the sternum descends obliquely, crosses the sternum, and runs up here to the right, and that is separated by an area of comparative resonance from the area of dulness, which starts at the right sternal border, as nearly as I can determine, passes out to the left outside the nipple, and down. The upper border of the heart is at the upper border of the fourth rib. It is abnormally low, and suggests that the heart is pushed downward and to the left, as we know is so often the case in aneurisms of the arch of the aorta. The position and shape of the heart indicate a dislocation to the left, but the left border of the heart runs so far outward as to suggest some hypertrophy of the left ventricle. Hypertrophy of the heart is not caused, as is popularly supposed, by aneurism *per se*. There must be some other factor produced by the aneurism which in itself is capable of producing hypertrophy; and in this case there is an insufficiency of the aortic valve, which is capable of producing hypertrophy and dilatation of the left ventricle, and that properly explains the great size of the heart to the left. The cause of this aortic insufficiency is probably to be found in pressure. I might say in passing that there are two modes of its production in these cases. It is extremely common in cases of aneurism of the arch of the aorta, and in some cases it is probably due to an actual stretching of the aortic ring. In other cases there is pressure made by the sac upon the basal portion of the heart at the region of the aortic

opening in such a way as to cause a muscular insufficiency of the aortic valves. Which of the two is present here is not easy to say.

I should add that percussion of the lungs is practically negative, except that possibly there is a slight diminution of resonance over the left half, especially over the lower portion of it. Breath sounds over the left lung are diminished somewhat, as compared with those on the right side. On auscultation, starting at the apex beat, one hears muffled heart sounds; they are feeble, and the first sound is accompanied by a feeble murmur. Passing upward to the aortic area, one finds in the third interspace, to the right, heart sounds are heard plainly. The first sound is somewhat muffled and obscured by a murmur. The second is ringing and is also accompanied by a faint murmur. The sounds are transmitted abnormally far outward and downward, being heard with great distinctness internal to the right nipple. At the left the pulmonic second sound is accentuated. Over this area of dulness, which represents the situation of the sac, there is no distinct bruit heard, a feeble bruit perhaps. In the neck on the right side there is one distinct arterial tone, whereas on the left side there are two. One can detect a specially interesting phenomenon when he auscultates in the mouth. When the patient holds the bell of the stethoscope between his teeth and stops breathing for a moment, two murmurs of great harshness are plainly audible, and are the audible expression of the same murmurs which one hears more feebly down in the chest.

An attempt was made by the interne to make an examination of the larynx the other day, but he found it impossible to get a good view, due largely to the fact that the patient's throat was unusually sensitive, even though it had been cocainized, and also the epiglottis could only be lifted to an angle of about thirty degrees, so that he was unable to satisfactorily inspect the interior of the larynx.

This is plainly a case of aneurism of the aortic arch, and cannot be mistaken for anything else, on account of the clearness and definiteness of the signs and symptoms.

The chief question of interest is, What is the location of this aneurism? It seems to me the aneurism is unquestionably one of the transverse arch. This is borne out by the character of the symptoms, especially the fact that there is dyspnea rather than pain, and that there are evidences of pressure upon the recurrent laryngeal nerve. I might mention here what I forgot to say in my previous remarks, namely, that tracheal tug is faintly present. When the neck is strongly distended one can detect a distinct,

though not pronounced, downward pull of the trachea, corroborative evidence merely of aneurism of the transverse arch, but not by any means a pathognomonic sign, as was once supposed.

This case is interesting from several standpoints. There is no history of syphilis, but there is a history of hard labor and of the immoderate use of alcohol in earlier life, and perhaps the etiology of the case is to be found in the degenerative changes in the coats of the aorta produced by these two factors, although many pathologists deny that aneurism can be produced by sclerosis merely, unless it be of syphilitic origin. The case is interesting, too, from the fact that there are no distinctive signs of pressure effects upon the circulation. There is no great distention of superficial veins, as in many cases, and what little disturbance of circulation there is in the liver and in the internal veins might very well be ascribed to the changes which have been produced in the heart. Probably pressure of the sac itself exerts a considerable influence in the production of stasis, although there are no marked evidences of pressure upon either vena cava. The case is likewise interesting from the fact that the prolonged rest in the hospital, patient being in bed for considerable periods of time, and not being subjected to conditions that would aggravate the disease, has not caused a marked or rapid progress in the growth of the sac; in fact the record of findings, when the patient entered the hospital, was very largely that of to-day. The great difference is found now in the changes which have taken place in the voice, and some evidence of greater internal pressure. The case can be classified as one in which the aneurism produces both subjective and objective signs.

The treatment has been the ordinary routine treatment of symptoms—rest in bed, rather light diet, iodide of potassium, and then treatment symptomatically as occasion required.

After a lengthy campaign the antivaccinationists have succeeded in having compulsory vaccination done away with in the public schools of Toronto; there was no serious opposition on the part of those who favor compulsory vaccination, but it would not be fair to take this fact as an indication of the general opinion in the city on the question of vaccination. Smallpox in Toronto has recently been so mild that the inconvenience resulting from the quarantine has been the worst part of the matter.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

TWO NEW THEORIES OF SLEEP.

Medical speculation has been enriched by the addition of two new theories concerning the origin of sleep. One of these is suggested by Salmon (*Revue de Médecine*) which attributes the causation of sleep to an internal secretion of the pituitary body. The other is suggested by Devaux (*Archives Générales de Médecine*) and relies upon the phenomena of osmosis. The first theory is a very simple one. It consists in deducing a special rôle for the pituitary body as indicated by pathological conditions in which there is a modification of this gland, conditions which are accompanied by somnolence or insomnia. It is shown that in tumors of the pituitary body, with or without acromegaly, myxedema, in sleeping sickness, and in certain intoxications and autointoxications—in brief, in all those morbid conditions in which there exists a hypertrophy or increased functional activity of the pituitary gland—one finds somnolence; whereas insomnia appears in all those affections characterized by an atrophy or a functional destruction of the pituitary body, as in diabetes, old age, neurasthenia, and certain intoxications. It is the opposition in these two orders of facts which leads Salmon to the hypothesis that physiological sleep is due essentially to an internal secretion of the pituitary gland.

Devaux's theory makes sleep depend on the phenomena of osmosis. When an osmotic substance with affinity for water, as chloride of sodium, urea, alcohol, or sugar, is momentarily arrested in the tissues, it provokes a transudation of liquid toward the static plasma or that which surrounds and bathes the anatomical elements. There is, therefore, a dilution of the osmotic elements, and the blood itself having yielded part of its water becomes thick and viscid, especially in the capillaries. It is easy

to realize what results to the brain when these osmotic substances with their avidity for water are retained in the tissues. These substances begin to withdraw fluid from the auditory, optic, or psychical centers, a certain quantity of water. The circulation in those parts becomes less active, oxygen is brought in lesser quantity, the activity of the nervous centers declines, the state of consciousness becomes clouded, then comes somnolence, and finally sleep.

EDITORIAL NOTES.

Bad Advice.

The bankers of the country recently received from the Secretary of the Treasury a circular in which he advises the issue of a larger proportion of national bank notes of low denominations, claiming that the circulation of these notes is of longer duration than that of the one-hundred, five hundred, and thousand dollar bills. Undoubtedly this is sage advice from a financial standpoint, but he further urges the bankers not to send in their notes for redemption until they are "unfit for use." Such advice is most pernicious, betraying as it does an utter ignorance of the first principles of sanitation. It certainly is a step backward to urge such a procedure. What is needed, and what the medical profession has always advocated, is the early redemption of soiled bank notes which have been demonstrated to harbor innumerable germs and thus aid in the dissemination of infectious diseases.

An Important Decision.

The Supreme Court of the State of Michigan recently handed down a decision upholding the right of the State Board of Registration in Medicine to revoke the license of a physician for causing objectionable advertising to be printed, in its decision in the case of a well-known local quack against the State registration board. Some time ago the board ordered the quack to show cause why his license should not be revoked for publishing an alleged obscene and offensive advertisement in a local newspaper. The quack started suit against the board, claiming it had prejudged his case, and that the law under which it proposed to revoke his license was unconstitutional, and praying that the board be enjoined from cancelling his certificate. The injunction was denied by the court below, whose judgment has now been confirmed by the Supreme Court. In both courts it was decided that

the case was not prejudged, and the constitutionality of the medical registration act was sustained. The contention that the board in passing upon what is obscene and objectionable advertising is exercising a judicial power is said to be unfounded. It is held that if the board acts unjustly and without reason in revoking the certificate of a physician, there is nothing to prevent his obtaining an adequate redress in a court. This is the most important judicial decision that has been handed down by the Supreme Court in years. It now remains to be seen how successful will be the fight against quackery by the State board. It is not to be supposed that the quacks, who in many instances have not only ample means but the passive coöperation of the newspapers, will give up their lucrative occupations on account of the decision.

To Relieve the Suffering of Wounded Soldiers.

The horrors of the battle-field have always been augmented by the suffering of the wounded. By most soldiers the fear of death is held very lightly, but to be wounded and suffer untold tortures before help can arrive is feared by all who follow the profession of arms. To overcome this unnecessary suffering, Professor Schleich, of Berlin, in a pamphlet recently published, offers a suggestion of relief. He proposes to give each soldier three capsules, each containing a mixture of chloroform, ether, and ethyl chloride. In the event of becoming wounded the soldier is to break one of the capsules and inhale its contents, which Schleich claims will produce a narcotic sleep without producing true narcosis. We can only see good in this procedure if practice bears out Schleich's claims and the dose in the capsule produces only sleep and not death.

Death of Manuel Garcia.

There occurred in London early last month the death of Manuel Garcia, at the age of 101 years, who occupied a unique position both in his own profession, that of music, and in medicine. Garcia first attracted attention in 1855 by his remarkable paper "Observations on the Human Voice," which he read before the British Royal Society. Last year his centenary was celebrated in London, and was a world-wide tribute to his eminence as a musician as well as to his discovery of the laryngoscope. Garcia, while not a physician, will always hold a high position in the annals of medicine.

ITEMS AND NOTES.

One case of yellow fever and one suspected case have been reported from Havana.

The eighth session of the Australian Medical Congress will be held at Melbourne, October, 1908.

A despatch from Manila reports that cholera has appeared in that city and the surrounding provinces.

It is asserted that the case of yellow fever recently reported from New Orleans has proven itself to be typhoid fever.

On June 18, 1907, the Fourth French Colonial Congress will be opened at Paris with numerous departments on important medical subjects.

Dr. George Blumer has been appointed to the Chair of the Theory and Practice of Medicine in Yale University to succeed the late Dr. John S. Ely.

Drs. Frank Allport and Harold N. Moyer, of Chicago, received the degree of LL.D. at the annual commencement of Notre Dame (Indiana) University, on June 14.

The Philadelphia Bureau of Health on June 26 condemned thirty-seven of the one hundred and seventy-one slaughter-houses in the city, on account of unsanitary conditions.

The latest venture in philanthropy in Chicago is a medical social settlement on the west side, to be conducted by the Chicago Tuberculosis Institute. A feature will be a large roof-garden for children.

The *Canadian Journal of Medicine and Surgery* devotes the greater portion of its July number to matter relative to the meeting of the British Medical Association, which is to be held in Toronto in August.

All the pharmaceutical preparations made in Turkey will be henceforward subjected to an examination by the Medical Council. Only after this examination will they be offered for sale. They will have a label attached with an inscription, "Autorisé par le counseil medical." Those submitting the preparations to an examination will have to pay a small tax.

Announcement is made that the *California Medical and Surgical Reporter* has purchased the *Los Angeles Medical Journal,* and that the publication of the latter as a separate journal will cease.

The officers of the American Congress of Tuberculosis announce its next session for November 14, 15, and 16, 1906, in New York City. The president is Dr. F. E. Daniel, of Austin, Texas, and the secretary is Dr. M. M. Smith, of the same city.

The Civil Service Commission has announced an examination to be held for the purpose of obtaining sufficient eligibles from which to organize the force of meat inspectors, which was authorized by the Agricultural Appropriation Bill passed by Congress recently.

The International Red Cross Conference which has been held at Geneva, Switzerland, came to a close on July 6, and it is stated that the desired changes in the international Red Cross agreements were made without serious objection by any of the powers taking part.

The 1906 annual meeting of the British Medical Association will be held at Toronto, Ontario, on August 21, 22, 23, and 24. This will be the second time within a few years that this great medical body has crossed the Atlantic in order to bring the parent body in closer touch with its Canadian members.

Kaiser Wilhelm conferred the Star of the Crown of Prussia upon Dr. von Muhlig on the occasion of the fiftieth anniversary of his appointment as physician to the German hospital in the Turkish metropolis. This hospital is one of the best institutions of the kind on the banks of the Bosphorus, neither efforts nor money being spared to make it the pride of the German colony.

In spite of the earthquake the president of Cooper Medical College, San Francisco, gives notice that the Lane medical lectures will be delivered this year on August 20, and five days following. The course will be given by Dr. John C. MacVail, medical officer of health for the counties of Stirling and Dumbarton. The lectures will be devoted to various subjects relating to practical hygiene, epidemics, and preventive medicine.

A writer in the *British Medical Journal* notes that no love was lost between Scarpa and Rasori, who were contemporary teachers at Pavia. One day Scarpa was standing under the

portico of the university when Rasori, who happened to pass, let fly a jibe at his brother professor. Scarpa replied: "Some time or other the razor must lose its edge." To which came the retort from Rasori: "It will always be sharp enough to cut a shoe (Scarpa)."

The new Berlin Pathologic Institute was formally dedicated June 10, and it is said to represent the realization of Virchow's highest ideal of an institute for research in this line, says the *Journal of the American Medical Association.* The historic building in which he worked and taught is to be demolished. His plans for the new institute have been amplified, much space having been given for photographic purposes and lantern demonstrations, especially in the dissecting building. The group of buildings comprise the museum which was finished in Virchow's day, the main building, the "Obductionshaus," and the animal building. The institute is in charge of Orth, who has continued Virchow's work as professor and also as editor of *Virchow's Archiv.*

In order to obtain the funds necessary for a substantial strengthening of the institution for the orphans and widows of medical practitioners, a sort of tax has been proposed by the Central Medical Board of Vienna, says the *Journal of the American Medical Association.* A prescription in Austria has to be signed by a qualified practitioner holding the diploma of M.D., and to be dispensed only by certain apothecaries, who are responsible for the quality of the drugs sold by them. The tax proposed is to be levied in such a way that the apothecary affixes a stamp of the value of one-third of a cent to the prescription, charging it in the price of the medicine, the stamps to be obtained by the thousand from the central medical board of the different states in Austria. It is calculated that such a tax would bring in, in Vienna alone, about $12,000 a year, or about $150,000 a year throughout the empire. The plan has met with violent opposition from certain classes of the population, chiefly certain druggists and quacks. The legislature has not yet taken the matter up, but undoubtedly this or a similar scheme will be found advisable, as the condition of the profession requires urgently the aid of the state, as well as of the public.

Manuel Garcia, celebrated as an operatic tenor, as a teacher of singing, and especially as the inventor of the laryngoscope, died on July 1, at his home in London, in his 102d year. The achievements, says the *Medical Record,* of this remarkable man

were brought prominently forward on the occasion of his centenary, celebrated on March 17, 1905. Born in Madrid of a family unusually gifted in vocal music, he was educated as a professional singer, but in 1829 he gave up the stage and began to devote himself entirely to teaching. His ability soon won recognition, and in 1835 he was appointed professor of singing at the Paris Conservatoire. In 1840 he presented his "Memoire sur la Voix Humaine" before the French Academy, which as well as his "Traite Complet de l'Art du Chant," published seven years later, gained for him a world-wide reputation. The manner in which an inspiration coming suddenly to him in 1854 led him to the development of the laryngoscope may be found, described in his own words, in an article by Dr. James E. Newcomb, appearing in the *Medical Record* of March 25, 1905. He preserved almost until the last a degree of mental and physical vitality characterized as nothing short of marvelous, and his later years were passed in peaceful enjoyment of the distinction which his achievements had secured for him.

A SPECIAL report on the blind and deaf of the country has been issued by the census office, under the direction of Dr. Alexander Graham Bell. The total number of blind persons in the United States in 1900 was at least 64,763, of whom 35,645 were totally blind. Of this number 37,054 were males and 27,709 females. The blindness was congenital in about one-tenth of the cases, and developed after the age of twenty years in 65 per cent. The native-born whites suffer less from blindness than do negroes and the foreign-born. In about 5 per cent of the cases reported the parents were cousins. Of the blind whose parents were so related, 25 per cent were congenitally blind, while among the blind whose parents were not cousins the proportion of congenitally blind was only 6.8 per cent. Of the blind, at least ten years of age, 20 per cent were engaged in some gainful occupation. Deafness is more common in the northern part of the United States than in the South, and there are more deaf males than females. The total number of deaf is given as 89,287, of whom 37,426 were totally deaf, and 51,861 partially deaf. From the latter class, however, are eliminated those merely "hard of hearing." Of the totally deaf 52.5 per cent were males, and 91 per cent were deaf from childhood (under twenty years of age) and 36 per cent from birth. Of the 89,287 persons reported as deaf, 55,501 were able to speak well, 9417 imperfectly, and the remainder not at all.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Wounds of the Ureter.

W. R. Cubbins (*Surgery, Gynecology, and Obstetrics,* June, 1906) has from his study of the regenerative activity of the ureter to wounds involving all the coats of the tube drawn the following conclusions: (1) Regenerative activity of the ureteral mucosa is very marked. (2) Muscularis, submucosa, and adventitia regenerate here the same as in other places. (3) Continuous suture is to be recommended in wounds of the ureter. (4) Transverse two-thirds of diameter and longitudinal wounds of the ureter heal without suture. (5) Catgut is preferable to silk, as it leaves fewer scars; there is less danger of obstruction due to kinking. (6) Sutures of wounds in small ureters nearly always cause some obstruction and renal disturbance. (7) A papillomatous formation is usually due to the presence of suture material in the lumen, but not always. (8) Van Hook's method is simpler on account of the shoe-horn effect of the incision. It also gives a wide surface for firm adhesions and causes practically no renal obstruction.

Excision of Portions of the Chest Wall for Malignant Tumor.

B. Rixford (*British Medical Journal,* June 23, 1906) reports five instances of resection of the chest wall for recurrent carcinoma of the breast in four patients, and one of removal of the clavicle and first rib and portion of the sternum for sarcoma. The artificial pneumothorax caused by such operations, if unilateral, presents, it is held, no dangers sufficient to constitute any contraindication to surgical treatment of this kind in patients who in other respects are well enough to tolerate radical measures. The fatiguing respiratory efforts which supervene when the chest is opened may be almost entirely done away with by the use of a wet towel covering the opening during the operation. In these six cases there was no operative mortality, although most of the patients were well advanced in years, the youngest being forty and the oldest seventy.

Of the four cases of recurrent carcinoma, death occurred in

the first four months after the operation; the second patient had further recurrence in the mediastinum after an interval of eight months; the third had further recurrence in the next lower intercostal space, for which a second resection was practiced, and when this paper was written six months later he was still free from further recurrence. The fourth patient remains free from recurrence, two years having passed since the date of operation. The subject of the extensive operation for the removal of a large sarcoma involving the first rib and the sternum and occupying the anterior mediastinum was well and strong when last seen, eleven months after the date of this treatment.

The author, in concluding, points out that although life has been prolonged in these cases, it is still too soon to decide whether any of the three patients who, when last seen, were free from recurrence will remain so.

Head Injuries.

M. A. Bliss (*Interstate Medical Journal*, July, 1906) says that head injuries cannot be estimated as to severity immediately after their occurrence, apparently trivial external injuries being sometimes followed by symptoms of the gravest character. Shock may as a rule be excluded if a free interval of appreciable duration occurs. General symptoms, such as disturbances of consciousness, of pulse-rate and breathing, vomiting, motor restlessness, spasmodic movements, etc., occurring after a free interval usually denote hemorrhage even in the absence of localizing signs. Lumbar puncture may be of service in diagnosis of hemorrhage. Traumatic meningitis demands prompt and thorough drainage. All head injuries of any severity demand constant watchfulness on the part of both neurologist and surgeon.

The Parasite of Cancer.

Schmidt (*Fortschritte der Medicin*, 1906) claims to have discovered the parasite of cancer. This he has grown in culture together with its intermediary host. The organism is an ameba which when examined becomes a shapeless mass of protoplasm. This parasite does not develop throughout the whole media, and the intermediary is a fungus such as is found in malignant growths. In cultures of mucor racemosus grown from cancers Schmidt demonstrated his parasite encysted, and by means of

this material employed as inoculating media he succeeded in producing tumors in rats and mice resembling Jensen's tumors. In a single case he produced a typical carcinoma, proving its malignancy by microscopical examination.

Hand Disinfection.

C. P. Olendoff (*American Medicine,* May, 1906) gives an account of experiments performed by a sophomore class in surgery at Cornell University to test the value of many widely used methods for obtaining aspesis, and to impress upon the students the extreme care necessary to secure surgical cleanliness. The experiments consisted in smearing the hands with some pathogenic organism, cleansing in various ways by the individual students, and then immersing the hands in agar sterile plates. These plates were then incubated. The results showed a rather general contagion of the plates, but a marked freedom from specific disinfectants for the hands.

MEDICINE.

Tuberculosis a Social Disease.

S. A. Knopf (*Journal of the American Medical Association,* June 16, 1906) takes up the social aspects of tuberculosis, the questions of its prevention by better social conditions and of its care and cure. He does not underrate the importance of hereditary predisposition in comparison with actual infection in infant tuberculosis. If we could prevent tuberculous marriages much could be done. He has seen no evidence whatever favoring the statement that tuberculous parents confer an immunity on the child, and believes that the practice of not nursing the infant also predisposes it to the disease. The importance of educating children to be good and not fastidious eaters is also emphasized. The dangers of infection in school from tuberculous schoolmates, and possibly, but much more rarely, from tuberculous teachers, is aggravated by insanitary school conditions and overtaxing the child. There should be more outdoor exercise. Gymnastics and swimming should be provided for in the public schools, and out-of-door recitations and singing are also recommended. Many children are underfed, and the providing of school lunches would be a worthy benevolence. While he believes that the association

of tuberculous teachers and children is inadvisable, he thinks that sometimes injustice is done, and he would multiply school sanitaria and employ the teachers there, or pension the teachers off instead of punishing them for their misfortune by discharge. The baleful influence of child labor even at home in some conditions of poverty is also noticed. The chances of acquiring tuberculosis from contact during early adult life or later may be reduced to a minimum by proper education of the subjects of the disease.

The influence of the use of alcohol in spreading acquired tuberculosis is also most important, and Knopf thinks the best remedy for this is to make the sale of alcoholic drinks a strictly government-regulated affair, and to put a check on the sale and use of alcoholic nostrums, which are even more dangerous because more deceptive. Next to alcohol, insanitary home conditions favor the spread of tuberculosis, and whatever will better the conditions of the poor will go a long way toward the reduction of its mortality. Lastly, he speaks of the duty of the community to the indigent victim of the disease, the needed multiplication of sanatoria, etc., and expresses the opinion that the solution of the tuberculosis problem means also the solution of the greater social problem of the day.

A Case of Leukemic Priapism.

At a recent meeting of the Vienna Clinical Society, V. Blum (*Lancet*, June 2, 1906) showed a man, twenty years of age, who was suffering from a very rare complaint. In the middle of the night, six days before being seen in the hospital, he awoke with a rather painful erection of the penis, which had continued ever since. No trace of mechanical injury could be detected on examination, and a history of sexual infection was absolutely and persistently denied. The length of the penis was 21 centimeters (8½ inches). It was hard like bone, but the erection depended only on the corpora cavernosa, for the glans was soft and allowed the rounded ends of the corpora cavernosa to be readily felt. The urethra was also soft and not swollen. There was no ejaculation or spermatorrhea. An examination of the blood was made, with the result that 565,000 leucocytes and 3,225,000 erythrocytes were found per cubic millimeter, the ratio of the two kinds of cells being therefore 1 to 5. The spleen was enormously enlarged, being 28 centimeters (11 inches) long and 24 centimeters (9½ inches)

broad. The connection between the two abnormal coexisting conditions was pretty clear, so that they no doubt were in the relation of cause and effect.

There are seventy such cases on record, in which priapism was caused by an abnormal condition of the blood. One post-mortem examination has been made, and revealed thrombosis of the blood cavities in the corpora cavernosa. Excessive pain very often accompanied the condition. The other possible explanation—namely, pressure upon the erector nerves of the penis or the prostatic plexus by enlarged glands—would cause distention of the corpus cavernosum and glands as well. The treatment in this case could be directed only against the leukemia. *X*-ray treatment of the penis and the spleen had effected a cure in a case reported by Goebel, and it was proposed to try it in this case as well. If septicemia should develop it would be necessary to open the corpora cavernosa in the hope of saving the patient's life.

Do Central Tracts of the Nervous System Regenerate?

L. P. Clark (*New York Medical Journal*, June 2, 1906) says that animal experiments fail to provide conclusive data that central tracts of the nervous system ever regenerate so that the former function is restored. In warm-blooded animals, and in the human species in particular, an abortive attempt on the part of the cord to regenerate is largely if not solely confined to fibers of undoubted peripheral type. Histological analysis of cases of hemisection, compression paraplegia, and myelitis, and the like destructive lesions of the cord fail to show positive evidence that actual structural regeneration of axis cylinders ever occurs in the central nerve tracts of the human spinal cord. In case of complete division of the brain and spinal tracts there is simply degeneration, followed by sclerosis. A most acceptable reason for non-regeneration of such tracts is shown in that the compressed nerve fibers do not possess a neurilemma sheath, from which nerve regeneration mainly if not solely occurs. This lack in cord and brain tracts, in contrast to the regenerating peripheral nerves, is due possibly to a difference of embryological origin for these two structures of the nervous system. The cases cited by Stewart and Hart for cord regeneration either do not fulfil the conditions of test, being merely hemisections, or are not convincing. The two suture cases reported by Stewart and Hart and Fowler are good illustrations of this type. In

cases of complete transverse division of the cord there is no sufficient justification either from experimental or clinical data to warrant suture of the spinal cord in an attempt to cure the defect.

Aplastic Anemia.

R. S. Lavenson (*New York Medical Journal,* June 23, 1906) reports a case of this rare and fatal condition. The patient was a woman of thirty-five, previously in excellent health, who without ascertainable cause was seized with a profound and rapidly fatal anemia. All the elements of the blood were lacking in quantity. There was a decrease in the number of both the red and the white cells, with marked diminution of the hemoglobin. There were no parasites present in the intestines, and there was no pathological condition in the urine. Shortly before her death the hemoglobin had become reduced ten per cent, and there were fewer than a million red cells. At the autopsy fatty degeneration of all the organs was found. The distinctive feature of the autopsy was the absence of any red changes in the marrow; it was absolutely pale. Examinations of sections of the marrow showed no megaloblasts and no normal myeloblasts. Before death no megaloblasts had ever been present in the blood, for these had been carefully looked for. It seemed clear that there was a total disappearance of the blood-making power. About ten cases of this aplastic anemia have been reported. The average duration of the disease was about three months.

Some Remarks Concerning the Tuberculides.

M. D. Hartzell (*Medical Record,* June 23, 1906) speaks of the classification of cutaneous tuberculosis which considers these affections as belonging to two groups—bacillary tuberculides, in which the tubercle bacillus is regularly demonstrable, and toxi-tuberculides, in which this organism cannot be demonstrated. In the latter group the skin lesions are presumably due to toxins produced in foci more or less distant from the seat of the eruption, and which reach the skin through the blood channels. The writer then cites the history of several cases of the so-called tuberculide, which is described in most recent text-books under the name of follicles. This affection is most common in children and adolescents. It is characterized by an eruption of small, dark-red or bluish nodules, generally most abundant upon the backs of the

hands, the elbows and knees, the feet and ankles, and the helix of the ear. In practically every case there is evidence of tuberculous infection. A more or less marked cyanosis of the extremities is almost invariably present. Drugs have little or no effect upon the eruption.

Formation of Leucotoxins by the X-ray.

Klineberger and Zoeppritz (*Münchener med. Wochenschrift,* 1906) in their efforts to determine the effect of the *x*-rays in leukemia cases performed a number of experiments demonstrating the leucolytic action of the blood serum of people exposed to the *x*-ray. This was done both *in vitro* and in the animal. Their experiments embraced the influence of the *x*-ray on ameboid motion on human pus, exudate and transudate cells, and on material from animals. The writers conclude by saying that the *x*-ray will not produce a leucolysin capable of acting *in vitro* in patients suffering from leukemia, pseudoleukemia, or lymphosarcoma.

Serum Diagnosis of Syphilis.

Wasserman, Neiser, and Bruck (*Deutsche med. Wochenschrift,* No. 19, 1906) have produced a serum which gives a specific reaction with the blood of syphilitics, and also indicates the amount of antibodies in the blood. The action of the serum is to inhibit or retard the process of hemolysis, and is similar in this action to Wasserman's work on typhoid, meningitis, and tuberculosis. The specific serum is made by mixing the inactive blood of monkeys treated with virus from syphilitic patients with the complement which is contained in fresh normal guinea-pig serum.

Malarial Fever.

A. W. Woldert (*American Medicine,* June, 1906) gives a detailed account of his personal observations made in Philadelphia and Texas regarding the anopheles mosquito. He says that in Philadelphia he only once failed to find the malarial-carrying mosquito (invariably the *Anopheles quadrimaculata*) in the houses in which autochthonous cases of malarial fever prevailed. In Texas he has never failed to find them. He also found that the male mosquitoes became more numerous as frost came on, while the female gradually disappeared. He gives a thorough

description of the development of the malarial parasite in the mosquito, and a full discussion of the period of incubation in the different forms of malarial fever.

THERAPEUTICS.

The Treatment of Diabetes Insipidus.

C. Posner (*British Medical Journal,* June 23, 1906) says the treatment of diabetes insipidus is not the most satisfactory part of medical science, and an etiological treatment is only possible when the disease depends on syphilis, and even then the treatment is not always successful. Strychnine is the drug which enjoys the first place in the medicinal treatment, but this only too often has no effect, or only a temporary one. The dietetic means which can be employed in this disease are limited to a restriction of the amount of fluid taken, and in some cases this has led to actual cure, and not only to apparent improvement. This so-called "dry" treatment is only of use in primary polydipsia, and is even dangerous and harmful in polyuria. The attempts to cope with this disease have therefore to be chiefly symptomatic, and the symptoms which call for most energetic treatment are the thirst and the polyuria. The thirst causes disturbed sleep, and thus if this can be limited the night's rest will be improved and the excretion of urine diminished.

The most striking abnormality in this connection in diabetes insipidus is the dryness of the mouth and the paucity of saliva. In order to increase the secretion pilocarpine has been given, but the exhausting diaphoretic effect of this drug renders it little adapted for the treatment. It has long been known that the act of mastication produces an increased secretion of saliva; it has therefore been suggested to employ "mastication tablets," mostly made of rubber or tragacanth, which are chewed, and also dried plums, which also have a mechanical effect on the secretion. The effect of the chewing is striking in cases of pleural or ascitic effusions, when large quantities of fluid can be removed from the body. Posner has only had the opportunity of trying the "mastication tablets" in one case of real diabetes insipidus, and was fortunate in being able to remove the excessive thirst, improving the sleep, and reducing the excretion of urine to normal. The specific gravity of the urine rose from 1004 to 1012, so that he claims to have an objective sign for the improvement. The nervousness which is so closely associated with the disease, how-

ever, was not influenced by the treatment. He states that the treatment has its disadvantages, in that the continual mastication is fatiguing to weakened patients; but nevertheless this suggestion may be found useful in some cases, and may prove of value in easing the distressing condition of a certain number of patients.

Trypsin in Malignant Growths.

W. A. Pusey (*Journal of the American Medical Association,* June 9, 1906) has followed the suggestion of Beard, of Edinburgh, and tested the effect of trypsin on seven cases of inoperable carcinoma and one of inoperable sarcoma. Fairchild's "injectio trypsi" was the preparation used, in beginning doses of from 5 to 10 drops, rapidly increased in some cases to 60 drops daily. In some cases the doses caused little pain and no subsequent irritation, in others abscesses formed, discharging when opened a thick, sticky, almost transparent serous fluid containing broken-down cheesy masses, and leaving unhealthy appearing sinuses, sometimes indolent and slow to heal. Local accidental infection, Pusey thinks, could be excluded, as strict asepsis was employed. In one case of circumscribed carcinoma in the pectoral muscle, distinct benefit followed the injections. After the opening and discharge of the abscess the growth disappeared as if digested, and the opening is now almost healed.

In the other cases Pusey believes the injections did harm. In several instances, after large injections, patients had chills. There were no other immediate constitutional effects, but in all patients who have had numerous injections cachexia has developed, and failure has been more rapid than before. Unless there was prospect of destroying a localized mass by a few injections, as in the one case mentioned, he would not now feel justified in using the remedy.

Diphtheria Antitoxin in Chorea.

B. J. Hamilton (*Medical Record,* June 16, 1906) saw a case of diphtheria in a boy fifteen years old about nine years ago. The patient had suffered from an aggravated form of chorea for several months. The writer gave the boy full doses of diphtheric antitoxin, after which the choreic symptoms disappeared and did not return. The boy lived only one week. Recently the writer attended a young man who suffered from chorea following rheumatism. Delirium developed into a violent mania, and

it was plain that unless relief was soon afforded death was not far distant. Three thousand units of diphtheric antitoxin were administered, after which the choreic symptoms were so much relieved that all restraint was removed. After two more doses, the first of 1500 and the second of 2000 units of antitoxin, all irregular muscular symptoms subsided and have not yet returned. It is now over a month since this treatment was instituted.

Conservatism in the Treatment of Senile Hypertrophy of the Prostate.

John Van der Poel (*Medical Record,* May 26, 1906) believes that catheterism properly applied and at the right time renders unnecessary many operations. Modern technique and advance in the knowledge of prostatectomy now make operations justifiable which would not have been so according to former statistics. Operation must be considered much earlier in poorer patients, or where aseptic catheterism is practically impossible, than in other cases. Prophylactic prostatectomy cannot be recommended. In acute retentions the catheter should be given a full trial before intervention. In certain cases catheterism will reëstablish the urinary function for many years, no matter what may be the condition of the prostate. In chronic retentions, if the case is septic and has been so for some time, clean catheterism seems to be powerless to eradicate its effects and operation is indicated.

Therapy of Cardiac Disease.

Hoffman (*Berliner klin. Wochenschrift,* No. 14, 1906) resorts to the usual remedies—digitalis, potassium iodide, and hydrotherapy—and finds that the first drug is indicated when the circulation cannot be accommodated by the arterial and venous system as occurs in valvular as well as muscular disease of the heart. Digitalis does not give good results when the second sound at the base is weaker than the first, or missing. The iodide is indicated in anemia with high arterial tension, though the kidneys must be sound and no symptoms of exophthalmos present; it is contraindicated if hemophilia is present. The author does not believe in administering this drug for too long a period. In hearts with a weak second sound cold-water treatment is indicated. He advises against cardiac massage and finds respiratory exercises of benefit.

Myiosis Treated with Calomel.

Smit (*Deutsche med. Wochenschrift,* 19, 1906) finds this class of affections is caused by the larvæ of flies which develop frequently in the body cavities opening to the surface. The process may become serious unless the larvæ are gotten rid of, and to accomplish this the author uses calomel, which he dusts over and into the cavity. He cites a case in which fifty-two maggots were expelled from a subcutaneous lesion after the application of calomel. In another case a young man was bitten by a fly in the nose, which in a few days was filled with the larvæ. Calomel was insufflated, and in a few days ninety-three maggots were discharged, when the lesion immediately healed.

Camphor in Pulmonary Diseases.

Volland (*Therapie Monatsschrift,* 1906) advises the use of camphor in pulmonary diseases accompanied with cardiac weakness. In incipient tuberculosis the pulse is easily regulated, and after treatment for one month with subcutaneous injections of camphorated oil the sweating and febrile attacks were alleviated. The author gives two injections, one in the morning and the other at night, giving 0.4 gramme camphor in twenty-four hours.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Pruritus Ani: Its Etiology and Treatment.

A series of clinical histories is given by T. C. Hill (*Boston Medical and Surgical Journal,* May 24, 1906) which classifies the exciting causes as: (1) Ulcerations or abrasions of the anal canal; treatment—cocaine anesthesia, galvanocautery, vaselin, opium suppository. (2) Local catarrh; treatment—secure soft evacuations by aperients, wash the bowel daily with a four-per-cent boric acid solution, apply stimulating silver nitrate solutions or Peruvian balsam to any remaining abrasions or ulcerations. (3) External hemorrhoids; treatment—removal under eucaine anesthesia; if the base of the pile is broad it is better to close it with catgut sutures, otherwise it may be allowed to heal by granulation. (4) Pockets in the mucosa above Hilton's white

line; treatment—swab out with balsam or silver as above noted. (5) Small polyps of the anal canal, protruding internal piles, prolapse of the rectum, and anal fissures, as well as other conditions, do doubtless occasionally cause itching about the anus, but very seldom in the writer's experience are they the cause of an old chronic or inveterate pruritus ani. When encountered, however, associated with pruritus, they should be dealt with according to their special surgical indications. To bring about the renewal of the skin which is tough and leathery and covered with dead and sodden epithelium, the author has found nothing better than silver nitrate solution and citrine ointment.

Ocular Eczema in Children.

Fred. Krauss (*New York Medical Journal,* June 30, 1906) says that ocular eczema is a disease common in childhood, forming twenty-one per cent of all eye diseases in children under sixteen years. It is most common at the age of two years, becoming less frequent as the age advances. It is endemic, but especially prevalent during the months of May, June, and April, in the order named. Treatment is very important in modifying its progress and tendency to relapse, and should comprise general treatment with attention to diet and hygiene, as well as local treatment for the eye; the severe and stubborn cases quickly improve when rest in bed is required of the patient.

GYNECOLOGY AND OBSTETRICS.

The Legal Responsibility of the Physician for the Unborn Child.

In his chairman's address before the Section on Obstetrics and Diseases of Women of the American Medical Association, C. S. Bacon (*Journal of the American Medical Association,* June 30, 1906) takes up the subject of the legal responsibility of the physician for the child *in utero,* pointing out first that it is as much a human being before birth as afterward, but that its biologic and its legal status do not altogether coincide. All persons after birth are on the same plane, and no one is justified in taking their lives except in self-defense, or when the state, through its judicial officers, has declared it necessary for the welfare of society. The fetus has not the same legal protection;

under certain circumstances feticide is considered justifiable. It is important that the physician understand the conditions and know what his duties are in obstetric emergencies. Operations involving the destruction of the life of the fetus introduce a question that is different from any that can come up in ordinary surgery, and involve an additional risk. It is this responsibility of the obstetrician that is particularly discussed by Bacon, who points out that the old common-law rulings have been replaced by statutory enactments, in which it is generally recognized that abortion is permissible when required to save the life of the mother.

In some States the law requires that the advice of two physicians be secured to determine the necessity of an abortion. When this is not the case, consultation is not essential, but always desirable. The physical condition of the mother must be shown to require the operation. Fear of suicide or of remote results developing from a nervous condition does not justify abortion. Abortion induced on account of probable injury to health might lead to trouble if brought before a court. In general, the operation is held admissible in cases in which delivery is impossible without Cæsarian section or some operation to enlarge the pelvic girdle, and that is refused by the mother. The legal standpoint as regards embryotomy is but little mentioned in the text-books, but in this country there is little or no doubt that if necessary to save the mother's life it would be justified by the courts. It has been discussed and decided by the Medicolegal Society of France that a physician cannot there be compelled to perform an embryotomy against his own judgment or conscience. In some States in this country the burden of proof that it was necessary might be put on the physician, but in most it would be on the state. Many conditions that were once deemed indications for embryotomy are not now so considered.

Judging from all the data found, Bacon concludes that the legal responsibilities of the physician are comparatively simple. If he believes the life of the mother is dependent on the sacrifice of the fetus, he can operate without fear, but it is always best to fortify one's opinion by consultation with a reputable colleague. The law does not recognize that the life of the unborn child is of equal value to that of the mother. In deciding on his moral responsibilities the physician may have more trouble; what is legally safe may not always be morally right. The frequency and boldness with which the right to decide the sacrifice of the fetus is claimed by the father or relatives of the mother must

be firmly resisted. The only ground on which Bacon sees the physician can stand when he decides to destroy the fetus is a kind of implied authorization on the part of the state which agrees to uphold the right of the mother to self-preservation when her life is endangered by that of the fetus.

Hydatid Disease of the Ovary.

B. Gibb (*Annals of Gynecology and Pediatry*, Jan. 19, 1906) reports, as the second case of hydatid disease of the ovary recorded in the United States, that of an Irish widow aged fifty-seven, who for eight months had noticed enlargement of her abdomen. She had been tapped, but had refused more radical operation. Her abdomen varied greatly in size, but when it was much distended she suffered from dyspnea, cardiac irregularity, and vomiting. When seen on January 31, 1905, she was much emaciated; her abdomen was enormously distended as if by ascites, but more rounded; it was not tender, and there was dulness instead of tympany at the most prominent part. The area of liver dulness was increased. Percussion elicited a well-marked hydatid thrill. The patient absolutely refusing operation at first, several ounces of fluid was withdrawn by a trocar; it contained many small cysts with characteristic hooklets. The patient declared she had often vomited material of the same kind.

The woman finally consented to operation, when the peritoneal cavity was found full of cysts of various sizes, some apparently quite free, most of them typical hydatids, with daughter and granddaughter cysts in a clear transparent but mucilaginous fluid. A network of bands separated the different collections of cysts, and it was only after breaking these down—and some of them had to be ligated on account of their size and vascularity—and washing out the abdomen that it was found that most of the cysts originated from, and formed a large tumor of, the right ovary. The very vascular pedicle formed by the right broad ligament was ligated and the tumor removed. The Fallopian tube was included in the mass, but was unaffected by the hydatid disease. The uterus was small, the left tube and ovary normal. Neither liver, spleen, kidneys, bladder, nor bowel were the seat of hydatids, but the greater omentum was reduced to a fringe along the greater curvature of the stomach, and this fringe was full of small cysts, and the walls of the stomach were also affected to a considerable extent. The cavity was cleared of cysts as far

as possible, flushed out freely with saline solution, and carefully explored. A Mikulicz drain was placed in the lower angle of the wound, and the latter stitched up in layers. Recovery was absolutely uneventful.

Gibb supposes the stomach to have been primarily infected. Immediately before the rapid development of the tumor the patient had a severe fall, which perhaps caused the rupture of a small quiescent cyst, and the dispersion of its contents. It was estimated that the amount of hydatid material removed from the abdomen weighed at least 30 pounds. The ovarian portion of the growth was a multilocular tumor larger than a man's head, at first apparently not circumscribed, but continuous with the other hydatid masses. When all the adhesions had been broken down it formed a well-defined mass independent of the rest.

Postpartum Gangrene of Lower Limb.

This condition is very rare. A. Schul (*British Medical Journal,* June 16, 1906) reports a case which occurred in hospital. The woman suffered from eclampsia, but was safely delivered and beginning to recover, when she developed a painful gangrene which involved the whole of the left leg and foot, and which proved fatal. In this case the gangrene was due to obliteration of the femoral artery. Puerperal gangrene is due to either arterial or venous obliteration, or to a combination of these. Endarteritis is more common than phlebitis, and a bacteriological examination of the clot generally shows the presence of an organism, either staphylococcus or streptococcus, or, as in the case reported, the bacillus coli. Postpartum gangrene does sometimes occur without any previous elevation of temperature; in the above case the temperature did not exceed 37.5° or 37.6° C. Obstetrical trauma, artificial delivery, hemorrhage, albuminuria, and eclampsia may all be considered as causes of infection which have an etiological importance. Some hours before death this case developed intestinal hemorrhage with abdominal pain and vomiting; these symptoms were in all probability due to a hemorrhagic infarct of the intestine the result of puerperal infection. The pathology of this condition is similar to that of puerperal gangrene in a limb; the autopsy reveals a clot in an intestinal artery. The prognosis is serious, and chances of successful surgical interference depend upon the position of the clot. The rate of mortality among these cases is very high.

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ORIGINAL CONTRIBUTIONS.

PHLYCTENULAR INFLAMMATION OF THE CORNEA.[1]

BY MARTIN F. COOMES, M.D., LOUISVILLE, KENTUCKY.

Phlyctenular inflammation of the cornea is confined almost exclusively to children between the ages of two and fifteen years.

The older ophthalmologists believed this disease to be a blood dyscrasia, and in this they were probably not far from correct. A microörganism resembling the *micrococcus flavus desid* .s has been found in connection with phlyctenular inflammation of the cornea, but the subject of his disease is always in a state of physical depravity when the disease manifests itself, therefore the soil must be in proper condition for the germ to develop and thus bring about the characteristic clinical manifestations.

General or localized congestion of the conjunctiva is always present in this disease and is the last symptom to disappear. The redness of the covering of the eyeball in some instances is mild. In aggravated cases in which the congestion is active and violent, there is always photophobia and excessive lacrimation. In typical cases the child (if it be only a few years old) will bury its head in the pillow at daylight, and oftentimes keep it there until twilight unless removed by force. In such instances ulceration of the cornea is usually deep; a large area of ulceration, or perhaps a number of small ulcers, will be found to exist in most cases of this kind.

The depth of the ulceration and the area involved will always govern the severity of the symptoms—that is, the more extensive the ulceration the more severe will be the symptoms. There is not infrequently an extremely annoying eczematous condition about the patient's nose and face, which should be treated in the same manner as an ordinary eczema.

The prognosis of the disease will depend upon the violence

[1]An abstract.

of the attack, the amount of corneal tissue involved, and the manner in which the case is treated by the attending physician. With proper care and prompt, active, and judicious treatment, the majority of these patients recover, with good vision.

The treatment is necessarily local and constitutional. Local treatment should be directed toward relieving the pain and arresting the progress of the destructive ulcerative process which usually occurs in connection with these cases.

To determine the condition of the ulcer, first cocainize the eye with a four-per-cent solution of cocaine, then drop into the eye a solution of methyl blue, five grains to the ounce of water, when the open portion of the corneal surface will be stained a deep blue.

The presence and size of the ulcer having been demonstrated by staining, the next step is to touch the ulcer with pure liquid carbolic acid. This can best be done by taking an ordinary dressing-probe, dip its rounded end into the carbolic acid, remove what can be shaken from the probe, and finally touch the surface of the ulcer, which will immediately become whitened by the acid. Some bland oil (as albolene oil) should then be dropped into the eye to insure against the excess of acid doing harm.

It is important to stain these ulcers each day, that their progress may be noted. If the area of blue is decidedly lessened, then further use of the carbolic applications will be unnecessary; but if there is no reduction in the size of the stained area, or if its area increases, then another application is indicated, and so on until the healing process begins. Usually not more than one or at the most two applications of carbolic acid will be found necessary.

Atropine is recommended for use in these cases by nearly all authorities, but for what reason I am unable to say. It dilates the pupil and allows an excessive amount of light to fall upon an already highly sensitive retina. A solution of sulphate of eserine, one grain to the ounce of water, dropped into the eye every six hours is quite sufficient to maintain a close pupil, thus reducing the light and stimulating the circulation in the sluggish vessels in the neighborhood of the ulcer, which is highly important.

In extreme cases a four-per-cent solution of cocaine may be used once in twenty-four hours. This, however, should only be done for the purpose of examining the eye. Nurses and mothers should be warned of the great danger of cocaine solutions, as the continued influence of the drug may destroy the cornea in a few

hours. I recently witnessed the loss of an eye by the patient disobeying directions in regard to the use of cocaine.

In prolonged cases it is wise to dilate the pupil every four or five days to insure freedom of the iris, as iritis might develop in connection with a case of phlyctenular keratitis. Atropine solution, two grains to the ounce of water, may be used for this purpose.

Where photophobia is intense it may often be relieved by wrapping the child in a sheet or large towel in such manner as to secure the hands and feet, then suddenly dipping the face into a bowl of cold water. This produces a decided reflex action; the child will usually open its eyes in a few minutes, and they will remain open for quite a while afterward. When the child is inclined to keep the eyes closed, it is a good plan to resort to this measure every morning, to relieve pressure, to give the eyes a chance to "cool off," and to let air into them.

The best of diet and tonics should be given in all these cases.

A REVIEW OF THE LITERATURE ANENT ABSENCE OF THE UTERUS AND VAGINA.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Pari passu with the marked advancement which has taken place in surgery and therapeutics during recent years, there has been a corresponding decadence in investigation and study of anatomical anomalies and individual peculiarities of the genus homo. This may be regarded as a "survival of the fittest," since human life is oftentimes predicated upon prompt and intelligent application of scientific surgical and therapeutic principles, whereas so far as immediate or ultimate results are concerned little depends upon consideration of anatomic or physiologic characteristics. However, there are certain malformations, errors of conformation and development, or *lusus naturæ,* which always possess sufficient interest to claim serious attention, and especially is this true of those involving the generative organs.

Congenital absence of the uterus, Fallopian tubes, and ovaries, with partial or complete presence of the vagina, constitutes an anomaly not infrequently observed, medical history containing a multitude of such instances; but total absence of the vagina, with presence of the uterus, tubes, and ovaries, must be exceedingly rare, as record of but few such cases can be found (except those mentioned by Gould and Pyle) in careful search of the literature.

Burrage in 1896,* after recording one case of congenital absence of both uterus and vagina, stated that about three hundred such instances had been reported in the last century. If this be correct, he must possess knowledge of statistical records inaccessible to the writer, since diligent search reveals less than half that number which can be regarded in any degree authentic. Epitomized excerpts of all the instances the writer has been able to collect from the literature to date may not be devoid of interest. It is unfortunate, from a statistical point of view, that many such anomalous cases are observed and never recorded in detail. Including those instances mentioned by Gould and Pyle† the writer has been able to find record of only about one hundred cases in which there was absence of either the vagina or the uterus.

Baux refers to a girl of fourteen in whom "there was no trace of fundament or of genital organs," and Oberteuffer also speaks of a case in which the vagina was absent. Vicq d'Azir is accredited with having seen two females who, not having a vagina, copulated per urethram.

Bosquet describes a girl of twenty with a triple vice of conformation—an obliterated vulva, closure of the vagina, and absence of the uterus—and who menstruated from the gums. A similar case observed by Clarke was authenticated by necropsy. Amussat saw a girl who had no trace of a vagina, but who menstruated regularly.‡

Griffith describes a case in which there was neither uterus nor vagina, the pelvis possessing male characteristics, and Duncan cites a similar instance in which the vagina was not more than an inch in depth. Ferguson mentions a prostitute of eighteen who had never menstruated. The labia were well developed, but there was no vagina, uterus, or ovaries. Coitus had been through the urethra, which was considerably distended, though not causing incontinence of urine.

Hulke reports (1) a case of congenital atresia vaginæ in a girl of twenty, menstruation occurring through the urethra; (2) an instance of atresia vaginæ with hernia of both ovaries into the left groin in a girl of twenty; and (3) a case of imperforate vagina with undeveloped uterus in a girl of nineteen.

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†Anomalies and Curiosities of Medicine.

‡It is presumed that in the original report the author explained the channel through which menstruation took place in the absence of a vagina. It certainly must either have been a case of vicarious menstruation, or there must have been a vaginal opening.—Q. W. H.

Brodhurst cites an instance of absence of vagina and uterus in a girl of sixteen who at four showed signs of approaching puberty; at this early age the mons veneris was covered with hair, and at ten the clitoris was three inches long and two inches in circumference; the mammæ were well developed; the labia descended laterally and expanded into folds resembling the scrotum.

Azema observed a case of complete absence of the vagina with impermeability and probable absence of the col uterinus. Bernard mentions a similar deformity in a girl of eighteen; and Gooding cites a case of absent vagina in a married woman, "the uterus discharging the functions."* Gosselin reports a case in which a voluminous tumor was formed by retained menstrual fluid in a woman without a vagina, and an artificial vaginal opening was created.†

Lieutaud and Richerand are each said to have dissected female subjects in whom neither uterus nor its adnexæ were found. Many authors are accredited with mentioning instances of defective or deficient uteri, among them Bosquet, Boyer, Walther, Le Fort, Calori, Pozzi, Munde, and Strauch.

Balade reported absence of the uterus and vagina in a girl of eighteen. Azam, Bastien, Bibb, Bovel, Warren, Ward, and many others record similar instances, and in several cases all the adnexæ (as well as the uterus and vagina) were absent, even the kidneys and bladder being malformed.

Phillips speaks of two sisters (both married) with congenital absence of the uterus, and Sedgwick quotes an instance of total absence of the uterus in three out of five daughters in the same family, and two of the three were twice married.[1]

Spruill reports the case of a woman aged twenty-two in whom there was congenital absence of the vagina, uterus, and ovaries. She had always enjoyed good health, but had never menstruated. There was no history of pelvic pain, nor could symptoms of pelvic disease be elicited. The external genital organs presented a normal appearance, the mons veneris and labia being well developed, but in attempting to examine the internal generative organs the

*In the original record doubtless the author explained how the functions of the uterus were discharged in the absence of a vagina! It is assumed he means that the woman menstruated vicariously or otherwise, but the abstract does not so show.—Q. W. H.

†Complete absence of the vagina is also mentioned by Carter, Polaillon, Curtis, Worthington, Hall, Hicks, Moliere, Patry, Dolbeau, Desormeaux, Gratigny; also, according to Churchill, by O'Ferrel, Gooch, Davies, Boyd, Tyler Smith, Hancock, Coste, Kluyskens, Debrou, Braid, and Watson.—Q. W. H.

finger could be introduced not more than an inch into what appeared to be the vagina. Having in mind an imperforate hymen the labia were widely separated and gentle force employed, but the finger could not be further inserted, the vagina being but a small cul-de-sac. Rectal examination disclosed neither ovaries nor uterus. With a sound in the bladder, the examining finger being still within the rectum, the point of the instrument could be distinctly felt.[2]

Bullitt relates the case of a young woman who had a congenital double inguinal hernia, the contents of each being the ovary and tube of the corresponding side. The right ovary and tube were removed, the left adnexæ being replaced in the abdominal cavity. The patient had never menstruated, and examination showed entire absence of vagina and uterus. The urethra was normally situated, but there was no vaginal orifice, the vagina terminating in a shallow cul-de-sac. Investigation was conducted per rectum, but not a vestige of uterus could be found.[3]

Garcin speaks of a slightly anemic twenty-year-old married woman who consulted him for relief of amenorrhea. She had never menstruated, nor had there been any vicarious hemorrhage, and examination showed that she was not pregnant. A suitable tonic was prescribed, and she was requested to report again at the end of a month. This she did, but there had been no improvement. A more thorough investigation revealed neither uterus nor ovaries, and the vagina was entirely absent. The urethra undilated would easily admit the thumb and index-finger. The husband stated that his wife manifested normal sexual appetite, and after intercourse she complained for several days of irritable bladder with painful micturition, indicating positively that intromission of the male organ took place through the urethra into the bladder.[4]

Stewart describes the case of a married woman aged twenty-eight years. The breasts and hips were distinctly masculine in conformation, vulva and clitoris normal, hymen absent, fourchette well developed, and a cul-de-sac 2.8 centimeters in depth (apparently formed by continued assaults of the male organ) existed in the location of the vaginal os. Examination per rectum under complete anesthesia demonstrated absence of the uterus, tubes, and ovaries. A nodule about 2 centimeters in diameter, situated between the rectum and bladder, seemed to represent the termination of the genital cord. The patient claimed to possess keen sexual desire, but signs of ovulation and menstruation were

negative. Her temperament was decidedly of the nervous type, and her character, voice, and face were quite juvenile.[5]

Todd was consulted by a woman twenty-four years old who had never menstruated. Her physical development was normal, and her mammæ were of the average size. Her general health had always been excellent, the delayed menstrual function having been productive of no symptoms to attract attention. Inspection showed less than ordinary prominence of the mons veneris; the labia (both major and minor) were imperfectly developed, having the appearance of a girl of thirteen or fourteen years old. The meatus urinarius appeared to be normal; the vaginal orifice was smaller and less elastic than usual; no hymen was present. The vagina proved to be two and a half inches in depth and terminated in a closed sac. Further investigation per rectum failed to reveal presence of either uterus or ovaries.[6]

Samuel reports the case of a married woman aged twenty-three years who had neither uterus nor vagina. She was markedly developed in other respects, the mammæ being normal in size, and where the vagina should have been there was a slight depression, not over one inch in depth, into which opened the urethra.[7]

Frank has observed three instances in which there was entire absence of ovaries, tubes, and uteri. All the women were unmarried, and in other respects development was normal. The breasts were large and prominent; the vagina was represented by a shallow aperture not more than two inches in depth; the urethral orifice in each case was normally situated.[8]

Bloom describes a girl of twenty-three who was totally undeveloped sexually. There was no hair on the pubes, she had never menstruated, and there was no mammary enlargement. Notwithstanding her age and development as regards stature and weight, her sexual organs were infantile. She had suffered no severe disease, and there was no assignable cause for the sexual non-development.[9]

Harlan records a case of congenital absence of the uterus and upper two-thirds of the vagina. The ovaries were present, but were embedded in the broad ligament.[10]

McCann cites a case of rudimentary vagina and uterus. The vagina was one and a half inches in depth, and the uterus was one and a quarter inches long. There existed a left inguinal hernia containing the ovary of that side. The same author also refers to a case in which there was entire absence of all the generative organs, both external and internal.[11]

Ramage records the case of a woman twenty-three years of age who had never menstruated. Examination disclosed absence of ovaries, and the uterus was but one and a quarter inches in length. Leach also reports a case of complete absence of vagina and uterus.[12]

Suavalle refers to a woman twenty-two years of age who had been married two years. Sexual intercourse was painful and followed by hemorrhage. Her pelvis was infantile and she had no vagina. Examination per rectum revealed the presence of a small nodule, probably a rudimentary uterus. The clitoris and labia were normally developed. The urethra was enormously dilated, easily admitting two fingers, caused by sexual intercourse per urethram.[13]

Boursier mentions a case of congenital absence of the vagina, with rudimentary uterus and tubes. The ovaries were apparently normal. The woman suffered periodic pelvic pains, but there was no menstrual flow. An artificial vagina was constructed and maintained by occasional dilatation by means of bougies, after which the pelvic pain diminished.[14]

Eberlein saw a woman of twenty-three who had been married five years. Since eighteen she had suffered vicarious menstruation, periodic nosebleed, and other discomforts. There was complete absence of the vagina, and consequent inability to cohabit. Examination showed a rudimentary uterus the size of a walnut.[15]

Ladinski reports the case of a woman of twenty-six in whom the uterus, vagina, ovaries, and tubes were absent. She was otherwise well developed, the pubic hair and breasts being normal; but her pelvis and vulva were poorly developed and the labia small. The introitus vaginæ was but three-fourths of an inch in diameter and one-fourth of an inch deep.[16]

Wright records the case of a girl aged eighteen who was slightly anemic, but otherwise in robust general health. Examination revealed a small canal-like cone one and a half inches deep abruptly ending at the apex, the surface of which was eroded, but the vaginal walls were smooth (*i.e.*, no rugæ). At the site of the uterus a cord-like mass of tissue could be felt. The pelvis was otherwise clear, and her breasts were hypertrophied. No menstrual symptoms had ever appeared except slight backache once per month for four years. She once vomited about a pint of blood, and had at other times spit blood in small quantities. Her urethra was normal, and blood had been found in the urine

on one occasion. Examination per rectum revealed no evidence of uterus, ovaries, or tubes.[17]

Mehrer speaks of a woman with rudimentary condition of the vagina and absence of the uterus and adnexæ. Jacobi also mentions a woman with complete absence of the uterus.[18]

Clapham records a case of congenital absence of the uterus in a girl of nineteen who had never menstruated. Investigation disclosed two "lumps" the size of ovaries in the inguinal canal. At the age of sixteen her breasts were well developed, pubic hair scanty. The vagina was two inches deep and closed at the upper end. She suffered frequent attacks simulating minor epilepsy.[19]

Lewers refers to the case of a girl aged seventeen with double uterus, double hematometra, and complete absence of the vagina. Withrow saw a woman of forty-six who had never menstruated. The vaginal orifice was normal, but the vagina terminated in a blind pouch into which no cervix projected. There was no indication of uterus, ovaries, or tubes. Another case was a married woman of twenty-three who had never menstruated. The vagina was represented by a cul-de-sac one inch in depth, which had been considerably distended by pressure from repeated attempts at sexual intercourse.[20]

Tuttle and Faidherbe noted instances of congenital absence of the internal genital organs. Tuttle's case was a woman of twenty with the history of complete amenorrhea, uterus and ovaries absent. There was a rudimentary vagina. She was well developed and her appearance was perfectly feminine. A similar case was observed by Dorland, a woman nineteen years old, who had complete amenorrhea with absence of the uterus and its adnexæ. Depth of the vagina was one inch; her pubic hair was normal, but there was no mammary development. Faidherbe's case was a duplicate of the one reported by Dorland, a girl of twenty, in whom there was complete absence of the genital organs.[21]

Milne observed a woman aged thirty-four who had been married two years. She had suffered dyspeptic attacks, for which medical advice had been sought; otherwise she had enjoyed good health, but had never menstruated. For several years she had endeavored by the ingestion of drugs to produce menstruation, with negative results. Under chloroform she was examined per rectum and per vesicam; no evidence of a uterus could be found, but there were present rudiments of the appendages. There was no vaginal opening, and the urethra was dilated, caused by sexual intercourse.[22]

Analysis of the foregoing statistics shows that in about ten per cent of cases the women were married, and in the most of these (as well as many others unmarried) coitus per urethram had been repeatedly practiced.

In the majority of instances the women were perfectly developed in all other respects, there being no deviation from the normal standard of general health in consequence of the abnormal conformation of the sexual organs, nor did other structures participate in the anomalous development.

It is probable that necropsy would in most instances demonstrate the existence of rudimentary internal genitalia, although superficial ante-mortem investigation indicated entire absence thereof.

Owing to the fact that all statistical data are in a measure untrustworthy, and that medical statistics are not entitled to unqualified acceptance, it becomes a matter of absolute impossibility to even approximately estimate the percentage of cases in which the details given can be regarded as strictly reliable from any standpoint.

In presenting the foregoing collection of cases the writer recognizes that the principal feature of interest is that each represents a more or less distinct *lusus naturæ,* though they do not materially differ in any of the essential characteristics, and his object will have been attained if he has succeeded in producing an intelligent epitomized abstract based upon the literature examined.

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ANEURISM OF THE AORTA.

BY C. A. ELLIOTT, M.D., CHICAGO, ILLINOIS.

This man is fifty-four years of age. He belongs to a family of mechanics. His father and mother both died at advanced ages. He has had six brothers and sisters, two of whom are dead, one of pneumonia and one by an accident. All of the others are living and well. His wife died five years ago of insanity following an operation for ovarian tumor. He has one child, twenty-one years of age, healthy, and a professional athlete by occupation. There is no history of aneurism, syphilis, tuberculosis, or malignant tumor in the family. He was born in Kentucky in 1850, and has lived in Chicago off and on ever since 1870. As a young man he was employed as a machinist and blacksmith. For seventeen years, until the beginning of the present trouble, he has been a professional athlete. For two years he was a trapeze performer and tumbler in a traveling circus, otherwise employed as a pugilist and trainer. At one time he kept a school of physical training. His habits are good; he drinks occasionally and smokes daily, but not to excess. His digestion and appetite are good. His bowels are regular. He has lost ten pounds since the onset of the present trouble, although he states that he has been gaining in weight of late.

As to previous illness, he had gonorrhea at the age of twenty-four, otherwise has never been seriously sick. At thirty-seven, after a pugilistic contest in Salt Lake City, he vomited a half-pint of blood. He denies ever having had syphilis.

The present illness is of four and a half years' duration. A diagnosis of aneurism was first made two years ago. The first symptom he complained of was shortness of breath. This has been present from the start, and is the most important feature of the case to him.

Pain has been present much of the time:

1. Felt in the right lower chest wall, which he describes as being similar to that experienced by the ends of a broken rib being rubbed together. This was present for about a year, but it has not been present now for two years.

2. Painful sensation as if the chest were squeezed in a vise, the scapulæ being ground together. This was present for two years, but has been absent for the last six months.

3. Shooting pains in his left arm, prominent two years ago, and occasionally felt at the present time.

4. Pain in the lumbar region on the right side, which is constant at the present time.

He has had some difficulty in talking, but this was more prominent six months ago than it is now. At one time he had a peculiar choking sensation, which he experienced upon swallowing, but that has not been present for six months, and there has not been any obstruction to the passage of food nor pain on swallowing at any time. A tumor was noticed two and a half years ago. He stated that it was considerably larger eighteen months ago than it is at the present time, but that for the last six months the tumor has been growing larger. A whizzing noise is heard by the patient at times in the chest. He has no cough.

He has been in a number of hospitals, and during a stay of three months in one of them, a year and a half ago, he received two gelatin injections. The first one was in the back, between the scapulæ. He stated that six ounces of a mixture of which he does not know the percentage was used, and this was followed by local pain, but no serious after-effects. A second injection was given in the right leg in the popliteal space, the amount being six ounces. This was followed immediately by pain and swelling, and the leg became infected. It was four weeks before he recovered from this infection, and at one time it was thought that it might become necessary to amputate the leg. Upon leaving the hospital at that time he was in bad shape, but has been gaining strength for the last year and a half, and the pain from which he suffered at that time has almost entirely disappeared. He has taken large doses of iodide of potassium and nitroglycerin over long periods of time.

Upon examination a pulsating tumor may be seen in the left chest wall. This is ten centimeters in diameter and extends from the second to the fourth rib, just to the left of the sternum. The apex beat is to be seen in the sixth interspace, about an inch to the left of the mammary line. A generalized arteriosclerosis is present, with pulsations of all of the superficial arteries. There is a capillary pulse that can be seen and felt. The pulses at the wrists show characteristic water-hammer pulsation, and a marked difference in the two sides; on the left the pulsation is not as prominent as it is on the right, and is slightly delayed, as shown by sphygmographic tracings taken simultaneously. It is almost impossible to detect it, yet with the instrument it is possible to demonstrate a slight delay in the left pulse.

Upon percussion the heart shows an inverted pear-shaped

area of dulness, fifteen centimeters in diameter, at the level of the third rib, extending three centimeters to the right of the sternum, and comes to a point at the apex in the sixth interspace, one inch to the left of the mammary line. The fluoroscope shows a definite boundary of the right side of the heart, three centimeters to the right of the sternal border, but the area over the tumor does not show so well in outline, on account of the constant pulsations of the aneurism. Upon auscultation at the apex there is heard a harsh, roaring, systolic murmur, and a soft diastolic murmur. Over the aortic interspace there is a double to-and-fro murmur, both systolic and diastolic. Over the tumor two murmurs may be heard, systolic and diastolic. Over the posterior aspect of the chest, at the level of the eighth rib, on the left side, can be heard two distinct murmurs, systolic and diastolic. Upon auscultation over the lower parts of the chest many râles may be heard, and at the left side of the heart occasionally a squeaking rub is to be heard. A tracheal tug is easily demonstrated. Skiagrams showing especially the aneurism and the dilated right heart have been taken, and a number of pictures will be shown. Urinalysis shows a large amount of albumin, with hyaline and granular casts.

To me there are a few interesting points in this case. First, the patient being an athlete, it seems fair to consider stress and strain, to which he subjected himself, the etiological factors back of his case. Second, he seems to be much better now, and the size of the tumor less than it was two years ago.

A CAMPAIGN to secure funds for the treatment of tuberculosis in Chicago was planned recently at the bimonthly meeting of the Executive Committee of the Chicago Tuberculosis Institute, says an exchange. Although efforts are being made to secure donations for summer camps and other means of treatment, the physicians and societies interested in the work pin most of their hopes for adequate funds on the charter legislation. A committee consisting of Dr. Henry B. Favill, Dr. Frank Billings, and Mrs. Lenora Hamlin, of the Institute, was appointed to confer with the charter convention in regard to additional revenue for the Department of Health. The Institute has raised, through the auxiliary committee, $1000 for a summer camp, but has been obliged to abandon its plan of having tents in one of the parks, the South Park Board having very properly declined to listen to a proposition to that effect.

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EDITORIAL ARTICLES.

INOCULATION FOR SYPHILIS.

Some little time ago Metchnikoff apparently inoculated successfully the ape with syphilis, and then became convinced that the simple friction of a calomel ointment over the seat of inoculation would render the infection inert. These experiments were, however, restricted to apes, and it is a well-known fact that these animals contract syphilis with difficulty, so that it was not considered that this proposed prophylactic measure offers mankind any security.

A short time ago Metchnikoff received unexpected assistance from a young doctor named Maisonneuve, a descendant of the celebrated surgeon of the same name. He offered himself for experiment, and inoculated himself with syphilis. He applied the preventive remedy, and no outbreak of the disease occurred. This has caused considerable sensation in the French press. Metchnikoff has maintained that circumspection and silence are not demanded in matters of prophylaxis, as it would be blameworthy not to make known widely all genuine methods of preservation.

After a number of articles had appeared in the daily press the matter was brought before the Faculty of Medicine through the thesis of Dr. Maisonneuve. The courage and devotion of the young doctor received unanimous praise, but the jury could not admit that without control experiment the prophylactic virtue of the experiment had been demonstrated. The discussion of this verdict produced a polemic in which Professor Grancher opposed Metchnikoff, giving out his opinion that a single experiment in man is too hasty and too limited a proceeding to confirm

the infallibility of any prophylactic measure. He thinks that in social hygiene it is not wise to proclaim *urbe ad urbem* that such simple remedies for syphilis are effectual, as the diminution of a salutary public fear of the disease will most certainly increase by a sense of false security the number of its victims.

While the value of Professor Metchnikoff's experiments must not be minimized, the expediency of caution in admitting his conclusions cannot be denied.

EDITORIAL NOTES.

The Pure Food Law.

The National Pure Food Bill, whose passage through the Senate we took occasion to urge some time ago, has been passed by the House and is now a law. At one time it looked as if the powerful adversaries of the bill would succeed in so amending it as to destroy its efficacy, but this fortunately they were not able to do, and we now possess a law which is better than its supporters expected. The law, if it be properly executed, will protect the public against misbranded and impure foods and drugs. The only weakness that a perusal of the bill shows is that there is no money appropriated for its enforcement. This, however, can be easily overcome if Congress at its next session in December will appropriate the necessary funds. The medical profession of the country was in no small measure responsible for the successful issue of this twenty-year struggle for a pure food law. Strong pressure was brought to bear upon the legislators by physicians through State and county societies, and by the American Medical Association through its Committee on Medical Legislation. This is but one instance of what a united profession can do, for our legislators have ears only for those who can in some measure affect their welfare.

Cancer—Can it Be Cured?

A paper under this title recently appeared in McClure's magazine and sets forth in popular form the method of treating cancer with trypsin as elaborated by Dr. Beard, of Edinburgh. The writer, C. W. Saleeby, M.D., F.R.S. (Edin.), endeavors to show that in trypsin an infallible cure for cancer has been found. The

only "facts" upon which the writer bases his conclusions are that two mice inoculated with cancer received injections of trypsin, and that the growth was apparently interfered with. He also cites a case of inoperable cancer in a man who received trypsin injections, and says that "so far as all indications go, the tumor was killed outright." Other cases are cited, but in no instance was any positive result obtained. Such sensational articles in popular publications can only result in harm, for while the profession is ever ready to adopt any means that will cure or alleviate cancer, the truth of any new procedure ought to be ascertained before it is given to the public. Articles exploiting new methods should not appear until their authors can show positive results.

Chloroform as a Cure for Whooping-cough.

Whooping-cough, that dread disease of childhood, which has persistently refused to give way to the many therapeutic measures proposed for its alleviation, seems from the accidental discovery of a Paris surgeon to be at last under control. Following an operation for dislocation of the hip-joint on a child suffering from whooping-cough, and who had averaged thirty-nine attacks during twenty-four hours, the operator noted that the child was free from coughing, and attributed the cessation to the chloroform inhaled. Following up his idea that chloroform might serve as a cure for the disease he has since treated nine other children with unusually severe whooping-cough by having them inhale a mixture of chloroform and oxygen for five minutes. In two the attacks have not recurred; in the others they dropped from twenty-nine to twelve, not returning after the fourth day. While his procedure is a dangerous one and should be used with the greatest caution, it will be warranted if further experience shows that by it whooping-cough can be cured.

ITEMS AND NOTES.

A CASE of typhus fever has been discovered in Philadelphia in the person of a young man recently arrived from Denmark.

DESPATCHES from Manila announce that the cholera situation is steadily improving, and that the number of new cases and of deaths is decreasing daily.

ANTHRAX is alarmingly prevalent in the rural districts about Bridgeton, New Jersey, and the State Board of Health has taken vigorous measures to stamp out the disease.

THE United States cruiser *Columbia* recently sailed for Boston from Porto Rico with 300 marines on board, of whom 165 were suffering from malarial infection, contracted at Panama.

IT has been decided to create in Constantinople a school for the blind and deaf and dumb. It is said that a tax of one per cent will be exacted from the salaries of state functionaries for the benefit of the school.

AN investigation into the possibilities of alcohol as a fuel for purposes of generating power is to be carried out by Prof. Charles E. Lucke, of Columbia University, for the United States Department of Agriculture.

AFTER a continuous service of thirty-seven years as secretary of the New Hampshire Medical Society, Dr. Granville P. Conn has resigned. His place has been filled by the election of Dr. D. E. Sullivan, of Concord.

DR. SAMUEL G. DIXON, State Commissioner of Health of Pennsylvania, has been distributing antitoxin gratuitously to the needy, and reports very encouraging results. In those cases in which it was possible to follow exactly the directions there was no mortality. The whole mortality of cases reported as diphtheria was three per cent.

AT the present time in Great Britain, says the *London Hospital,* there are no less than 40,000 makers or venders of patent medicines, and these patent medicines are computed to supply a revenue of 331,000 pounds to the state. Tuberculosis cures, cancer cures, epilepsy cures, paralysis cures, make up the large majority of patent medicines.

Among the members of the medical profession in foreign countries who have recently died are Dr. Ludwig Ebner, professor of surgery in the University of Gratz, and Dr. A. Josias, member of the Académie de Médecine and physician to the Paris hospitals.

Dr. B. H. Warren, Pure Food Commissioner for Pennsylvania, says that since the recent crusade against doctored meat in the State, twenty-four western counties have paid $72,000 in fines for selling adulterated and doctored products of the big meat packers.

Medical officers of the Marine Hospital Service, according to the last annual report, made over 5000 physical examinations of seamen and candidates for employment in the services which come under the government requirements in this respect, viz., the Revenue-Cutter, Lighthouse, Life-saving, Philippine Islands, Isthmian Canal, etc.

The second Belgian Congress of Neurology and Psychiatry will be held at Brussels from August 29 to 31, under the presidency of Miss Stejanowska, M.D., president of the Société de Neurologie, and Dr. Crocq, president of the Société de Médecine Mentale. The subjects proposed for discussion are pretended lunatics, the theory of the neuron, and mental tests in children.

Dr. Vaclav Podstata, superintendent of the Cook county institutions at Dunning, has been elected superintendent of the Elgin Insane Asylum by the trustees, to succeed Dr. Frank S. Whitman, resigned. The selection was made after the trustees had made a careful investigation of candidates for the place, and on the recommendation of a number of prominent Chicago physicians.

The Chicago Medical Society has appointed a committee of three pathologists to coöperate with the Chicago Commercial Association and the Illinois Manufacturers' Association in an investigation of the stock-yards. One of the questions which it is especially desired to study is whether carcasses affected with local tuberculosis are fit for food after the diseased parts have been removed.

The authorities of Baden are considering, says an exchange, the organization of a council comprising physicians, dentists, veterinarians, and druggists. The organization will deal with matters affecting the profession and the public health in general.

Membership in the medical chambers in Germany is compulsory on the physicians in a district where one exists. The new organization is planned along the same lines, only it will embrace the allied branches.

It is announced by an exchange that hereafter Boston will take care of its own rabies suspects. That is, all persons bitten by mad dogs, who would otherwise have to be sent on to the Pasteur Hospital in New York, at a cost of $200 or more each, will be treated at the Boston City Hospital at far less expense. Three cases have been treated successfully, the patients being discharged cured after a period of two weeks each, so it is alleged; but to make it certain the patients will be kept under observation for some time.

The Illinois State Board of Health has issued a new pamphlet, written on the same general lines as one published last summer, containing information on how to take care of babies. Suggestions are given for the nursing mother, artificial feeding is fully discussed, and the advantages and disadvantages of the various infant foods are carefully considered. This pamphlet is issued for gratuitous distribution, and those who wish copies should apply to Dr. James A. Egan, secretary of the Board at Springfield, Ill.

An elaborate French treatise on water-supply seems to prove, says *American Medicine,* that other diseases than typhoid are favorably affected by pure water. Twelve cities are enumerated to prove this. Periods of five years before and after the pure water was introduced are taken. It is shown that the average death-rate from typhoid fever decreased 69 in every 100,000 persons, leaving an annual death-rate from that disease of only 20 in the same number of inhabitants. But the death-rate from other diseases fell 410 in every 100,000 persons.

A Parisian surgeon, who operated on a servant in the presence of her mistress, was accused by the servant of having kissed the mistress, the woman testifying that as she was recovering from unconsciousness from the anesthetic she saw the act performed, says the *Medical Record.* The matter was brought up in a divorce suit, but as the result of the testimony of such prominent men as Brouardel and Debove, who pointed out the liability to sexual hallucinations of those under the influence of general anesthetics, the court rejected the evidence of the servant.

It has been decided to transfer from San Francisco to Berkeley all instruction in the first two years of the medical curriculum established by the University of California. In future, students desiring admission to the medical department will be expected to have completed a two years' course in physics, chemistry, zoölogy, and the German and French languages. Medical students at Berkeley, therefore, will start work at anatomy, physiology, and pathology as soon as they join. The last two years of the curriculum will be passed at San Francisco as heretofore.

The *Boston Medical and Surgical Journal* states that an out-of-door camp for sick babies is to be started this summer on an open space overlooking the river by the New York Association for Improving the Condition of the Poor; it is to accommodate one hundred infants in open tents. The object of the enterprise is less individual than general, the desire being at once to teach poor mothers how to take care of their children in hot weather, and to give an object-lesson to the city of the benefits which may be expected if open spaces are devoted during the hot season of the year to a similar purpose.

The report of the New Hampshire State Board of Health, published July 14, declares, according to the *Medical Record,* that of 408 samples of prepared food products examined 186 were found to be adulterated, misbranded, or below the standard. These samples include canned meats, milk products, jellies and preserves, catsups and table sauces, and other articles. Nearly all of these articles, the report states, are manufactured outside of New Hampshire, but there is no legal way in which their entry into the State can be prohibited. Judgments have been entered in the Circuit Court of Lexington, Ky., against several sausage manufacturers and jobbers for selling adulterated products in violation of the Kentucky pure food law.

Announcement is made of the organization of the New York Committee on the Physical Welfare of Schoolchildren. The formation of this body is the direct outcome of the very large number of appeals made last year by the principals of schools to the Association for Improving the Condition of the Poor in order to secure for children clothes, shoes, eye-glasses, better nourishment, etc. It is not expected that the committee will itself provide material relief or fresh-air outings for needy children. It is believed, however, that there are private and public agencies in existence that will effectively coöperate with health and educa-

tional authorities to secure prompt attention for children whose physical condition is below normal, and the committee will assist in the distribution of assistance.

In an accident bulletin issued on July 23, the Interstate Commerce Commission repeats its former opinion, that the block system is the best means for avoiding the occurrence of railroad accidents. The report, says the *Medical Record,* covers the months of January, February, and March, 1906, and shows the total number of casualties to passengers and employees during this period to be 1126 killed and 17,170 injured. This is an increase of 17 killed and 52 injured over those reported in the preceding three months. The number of passengers and employees killed in train accidents was 274, a decrease of 46. There were 1921 collisions and 1569 derailments, of which 289 collisions and 167 derailments affected passenger trains. The damage to cars, engines, and roadway by these accidents amounted to $2,924,785.

The Paris gynecologist, Prof. S. Pozzi, publisher and editor of the *Revue de Gynécologie,* recently completed, says an exchange, the twentieth year of work in the Broca Hospital as gynecologist and surgeon. His friends and pupils celebrated the occasion by presenting him with a gold book containing a series of articles on some phase of gynecology or abdominal surgery. They include some from the pen of Pinard, Delbet, Monprofit, Martin of Rouen, Treub of Amsterdam, Depages of Brussels, and many others. A gold medal was presented at the same time, the design representing Science wresting a woman from the clutch of Death. The presentation took place on the morning of July 8, at the scene of his labors, and a number of his former pupils from France and abroad assisted in the proceedings. Pozzi visited this country a year or so ago as the official delegate to the Congress of French-speaking Physicians of America, and made many friends here. He is regarded as the pioneer in establishing gynecology as a special branch of medicine in France. He will be sixty years old on October 3.

An amendment to the quarantine regulations applying specifically to all parts of the United States below the southern boundary of Maryland has been issued by Secretary Shaw, with the object of enabling the fruit steamers to land their cargoes without detention. Under the new rules vessels are allowed the alternative of remaining out of the United States ports until

five days from the time of leaving the infected port have elapsed, or of making a change of crew. In the latter case the ship is permitted to enter as soon as the crew, except the master and chief engineer, have been removed from the vessel, placed in the quarantine station, the living quarters of the vessel thoroughly fumigated, and a new crew placed on the vessel. Immediately after unloading all parts of the ship are required to be simultaneously fumigated for the destruction of mosquitoes. After this loading is allowed, and the relief crew remains on the vessel until the quarantine station is reached, where the old crew goes aboard. The members of the relief crew are compelled to remain at the quarantine station until the arrival of another vessel, or until relieved by the quarantine officer. Two sets of living quarters are to be kept at the quarantine station for the incoming and relief crews, and both quarters must be thoroughly fumigated immediately after being vacated.

According to the *New York Tribune*, the army officers are much pleased with the results of the precautions which have been taken to preserve the health of troops on duty at the seven camps of instruction, where will be mobilized in the next few weeks all the infantry, cavalry, and field artillery, together with some militia. Some time before the camps were occupied the army surgeons and quartermasters arranged for special apparatus to equip them with hygienic sewerage and water-supply departments. The system was a thorough one, and involved the purchase and installation of the latest methods of camp conveniences. The results have been observable on every side. There was some criticism of these arrangements on the ground that it would not preserve the element of emergency which would be encountered by troops suddenly ordered into the field. Of course, in time of war the mobilization of a large body of soldiers would have to be at places where the conveniences and comforts were improvised, perhaps in great haste, and with inadequate facilities. It was considered when the situation was fully discussed by the military authorities, however, that nothing was to be gained by approaching this incomplete state more nearly than was absolutely necessary. The first condition to be made by the army surgeons was bound to be the preservation of the health of the troops, and it was reasoned that in this respect the dire emergency, with its costly demands upon individual comfort and hygiene, might profitably be ignored.

NEW PUBLICATIONS.

THE EYE AND THE NERVOUS SYSTEM.

This book is the work of several American collaborators, oculists and neurologists, who have sought here to discuss the inter-relations of the eye and nervous system. In some of the chapters the imprint of the oculist is so marked, and in others that of the neurologist, that one may wish that each had written chapters on the same subject. The neuroses and psychoses present interesting alterations of the visual fields, the ocular muscles, sensation, anomalies of accommodation, pupilary phenomena, palsies, and pseudo-palsies. The oftentimes early and important ocular involvements in tabes are discussed in a chapter by themselves.

The book is edited by Dr. Wm. Campbell Posey and Dr. Wm. G. Spiller, and each contributes two chapters, the former upon Exophthalmic Goitre and the Psychological Effects of Operation on the Eye; the latter upon the Intracranial Portion of the Encephalic Nerves, Especially Those Related to the Eye, and the chapter upon Tumors and Other Lesions of the Brain. Dr. Chas. H. Frazier discusses the surgical side of such intracranial lesions as cause visual disturbance, and some nineteen other authors contribute as many chapters upon various related subjects.

Altogether much is here to be found which is of great value and direct bearing upon the subject of the book, while a surprising amount of material is found which seems to have no especial bearing upon the relations of the eye to the nervous system. A long discussion of reflexes seem to have no reference whatever to any relations of the eye, and one cannot escape the feeling that the book would better have served its special purpose had its discussions been confined to what its title would lead one naturally to expect.

The Eye and the Nervous System. Their Diagnostic Relations. By Various Authors. Edited by Wm. Campbell Posey, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic, etc., etc., and Wm. G. Spiller, M.D., Professor of Neuropathology and Associate Professor of Neurology in the University of Pennsylvania, etc., etc. Illustrated. Philadelphia and London: J. B. Lippincott Company. Pp. 988.

ECZEMA.

A detailed consideration of the diseases of the skin, known as eczema, is provided in the present little volume. The subject is thoroughly reviewed, and the various lines of treatment for all forms of the trouble carefully indicated.

Eczema. By Samuel Horton Brown. P. Blakiston's Son & Co., Philadelphia.

A COMPEND OF OPERATIVE GYNECOLOGY.

This is a handy little volume, which will be of great use to the practicing surgeon as a book of ready reference prior to the performance of any operation on the female.

A Compend of Operative Gynecology. By Harold Meeker, M.D. The Grafton Press, New York.

NOTE.—In our review of the publication Human Sexuality, we erroneously indicated the address of the Professional Publishing Company as Chicago. The address of this company is 1112 to 1114 Chestnut Street, Philadelphia.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Treatment of Fractures.

C. P. Anton (*British Medical Journal,* July 7, 1906), with a view to obtaining perfect consolidation of osseous fractures by means of immediate reduction and accurate placing of splints, recommends and describes an apparatus invented by himself. This consists of fourteen pieces of aluminum which can be conveniently packed up, and together suffice for the treatment of all the fractures occurring in the upper and lower limbs, and for fractures of the clavicle. They are to be padded with cotton-wool, and kept in place by bandages, for the application of which they are appropriately pierced. The two plates, right and left, for application to a fractured clavicle are grooved to keep the ends of the bone in place. Six pieces suffice for the upper limb, and can be used for the right or left side. They are grooved to fit into one another, and a telescopic arrangement provides for the adjustment of the apparatus to the length of the injured part. For fractures of the lower limb extra pieces are provided, ingeniously arranged so as to strengthen and fix any selected part of the apparatus. Each piece is stamped with its name and an indication of the locality for which it is intended. The pieces are illustrated both separately and in position, and the author adds a brief account with reference to his own methods of the treatment of ordinary fractures.

The Operative Treatment of Infantile Paralysis.

R. R. Taylor (*New York Medical Journal,* July 7, 1906) says that neuroplasty for infantile paralysis does yield after three months some positive results, provided we get good coaptation without tension or hemorrhage, in suturing end to end, if we can judge by Peckham's, Young's, and his own cases, and if the analogy to secondary suture for nerve traumatism holds good. That these results progressively improve after a year or more has elapsed following the operation has been shown; that wider experience, improvement in methods, the choice of case, and power-giving nerve should further improve the results; that

earlier operation and its more frequent employment in the milder monoplegiac should give an approach to cure; Jessup's successful secondary suture after nine years of paralysis shows us, however, that even at this late date regeneration is possible; that more careful notes, examinations as to irritability and conductivity made at periodic, daily, and monthly and trimonthly intervals in a large number of cases would do much to thrash out this question for therapeutical statistics; that while this paper does not claim perfect cure for nerve anastomosis, still the improvement gained is an argument that it is worthy of investigation. The procedure can do no harm, if conservatively done.

Wounds of the Ureter.

W. R. Cubbins (*Surgery, Gynecology, and Obstetrics,* June, 1906) has from his study of the regenerative activity of the ureter to wounds involving all the coats of the tube drawn the following conclusions: (1) Regenerative activity of the ureteral mucosa is very marked. (2) Muscularis, submucosa, and adventitia regenerate here the same as in other places. (3) Continuous suture is to be recommended in wounds of the ureter. (4) Transverse two-thirds of diameter and longitudinal wounds of the ureter heal without suture. (5) Catgut is preferable to silk, as it leaves fewer scars; there is less danger of obstruction due to kinking. (6) Sutures of wounds in small ureters nearly always cause some obstruction and renal disturbance. (7) A papillomatous formation is usually due to the presence of suture material in the lumen, but not always. (8) Van Hook's method is simpler on account of the shoe-horn effect of the incision. It also gives a wide surface for firm adhesions and causes practically no renal obstruction.

Urinary Calculi in Egypt.

Goebel (*Zeitschrift für Chirurgie,* 4, 1906) dwells on the frequency of bladder stones in Lower Egypt; they are, however, rare in Upper Egypt. This observation coincides with the distribution of the bilharzia in this country, and the writer ascribes the frequency of stone to the presence of this parasite. He suggests classifying the countries in which stone is frequent by the ages of the persons affected. In Italy, India, Russia, and Turkey children preponderate, whilst in Austria and Germany most of the people affected were over fifty years of age.

Primary Malignant Disease of the Vermiform Appendix.

H. D. Rolleston and L. Jones (*American Journal of the Medical Sciences,* June, 1906) say that accurate diagnosis in this disease is impossible. All the reported cases imitated appendicitis. The disease is not very rare, since 80.9 per cent of the forty-two reported cases occurred subsequent to 1900. The microscopic size of the growth in some cases makes it probable that many cases may have been overlooked. Several varieties of carcinoma have been reported, also sarcoma and endothelioma. The usual form is a spheroidal cell carcinoma, is peculiar to early life, is slightly malignant, and resembles endothelioma. Colloid changes are not as frequent as has been supposed. Concretions were found in only three cases. The disease does not attack one sex more than the other. Acute or chronic inflammatory changes frequently accompany the growth. The immediate prognosis and the prospect of freedom from recurrence after the operation are good, especially with spheroidal carcinoma.

Clinical Diagnosis of Pulmonary Abscess.

Rieder's (*Münchener med. Wochenschrift,* 17, 1906) patients showed an irregular fever without chills, and with indefinite percussion and auscultation findings. The sputum was abundant, but contained no elastic fibers, albumen, or crystals. A cavity in the lungs could not be definitely determined, but the presumption of abscess was confirmed by the *x*-ray findings. Treatment was expectant, using expectorants and inhalations and trusting to a rupture of the abscess into the air passages and its evacuation with the sputum which occurred. The value of *x*-ray work in these cases is emphasized and leads to the suggestion that abscess of the lung is more frequent than has been before suspected

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Postoperative Ileus.

J. M. Finney (*Annals of Surgery,* June, 1906) says that Broca's classification into early and late varieties is approved. In the former, which is often associated with peritonitis, the differential diagnosis as to variety is always difficult and often impossible. In the latter the diagnosis is usually easy. Adhesions form the chief factor to be considered in an attempt to prevent the occurrence of postoperative ileus. Efforts directed toward

this end are usually productive of good results. Drainage exercises a marked influence in the production of adhesions. Prompt operation is indicated in every case after palliative measures have been given a fair trial and have failed. The character of the operation depends upon the nature of the obstruction and the condition of the patient. The prognosis is unfavorably influenced by the presence of infection. It is excellent if infection is absent.

Experimental Burns.

Pfeiffer (*Virchow's Archiv,* Bd. 180) finds in cases of burning in which death occurs within six hours that it is due to shock. In death coming on later the cause is the absorption of the albumins which have been altered by the heat. In those cases in which death occurs in from two to three weeks it is not directly due to the toxins, but to changes brought about in the blood-vessels and other organs.

MEDICINE.

Phagocytosis.

The subject of phagocytosis, especially as it is affected by recent researches, is discussed by L. Hektoen (*Journal of the American Medical Association,* May 12, 1906). The importance of certain substances demonstrated in the blood and other fluids by Wright and Douglas, and called by them opsonins, and which render various bacteria susceptible to the phagocytic action of leucocytes, has, he says, given a fresh interest to the subject. It may be accepted as an established fact that phagocytosis of many bacterial and other cells is dependent on these special substances, normal and immune, which become attached to them and change them in some way so as to make them readily taken up by polynuclear leucocytes. Their action is specific, and they exist in normal blood capable of acting on various pathogenic and non-pathogenic organisms. Special opsonins can also be produced by the introduction into the organism of foreign cellular matter, and the mechanism seems much as in that involved in the production of other more familiarly known antibodies, and a number of facts are referred to indicating that they act primarily on the bodies to which the animals have been immunized, and not directly on the leucocytes.

The effect of certain infections in increasing the opsonins and the effect of heat on the vitality of these substances are also noticed. Little seems to have been done as yet, Hektoen says, in the production of specific antiopsonins, but it has been found that phagocytosis can be diminished by a number of chemical substances. The experiments of Hektoen and Ruediger indicate that this action is essentially on the opsonin, which they prevent from acting on the bacteria. Such non-specific antiopsonins may be important factors in the spread of certain infections, and it is perhaps in this direction that we should seek a better understanding of the so-called lessened vital resistance, and it would seem unwise therefore to inject into the tissues in diseases in which the defense depends on phagocytosis such agents as formalin and others that possess antiopsonic properties.

The reason why opsonic action of normal and immune serum may be regarded for the present as connected with distinct bodies is summarized as follows: (1) Normal serum may possess lytic power but not opsonic, and *vice versa*. (2) Immunization may give rise to opsonic substances, but not to lytic or agglutinating. (3) Heat may destroy opsonic power while the lytic amboceptors remain intact, and *vice versa*.

The structure of opsonins and their mode of action are discussed, and from all the facts the action may be assumed to be in so changing bacteria and other cells that these, by chemical or electric (or possibly by mechanical) means, diminish the surface tension of leucocytes and thus cause phagocytosis; or in other terms, substitute positive for negative chemotaxis. On the whole it seems to Hektoen that the studies of opsonins and phagocytosis place Metchnikoff's general theory, hitherto perhaps generalized too much, on a more substantial basis. The practical and therapeutic importance of these studies is discussed, and the article concludes with a reference to and brief account of Wright's method of therapeutic inoculation of vaccines in tuberculous infections.

Concealed Hemorrhage in Typhoid Fever.

I. Roman (*British Medical Journal*, July 7, 1906) has examined the feces in fifty cases of typhoid fever with a view to the detection of small amounts of blood. The tests used by him were the guaiac resin and aloin reactions on an ethereoacetic extract of the feces (15 to 20 gr.) with the addition of a little water. As a matter of practical experience it does not appear

to be absolutely necessary to make an extract of the feces, as just as good results were obtained by merely shaking up with a little water. Water alone, if it contains any iron, will give a reaction to the guaiac test, but the H_2S of the feces corrects this fallacy by precipitating any iron which may be in the added water. Of the two tests, the guaiac appears to be the more delicate, for this gave a positive reaction in cases in which the aloin test was negative, and in which even the spectrum gave no blood lines. As soon as the patients returned to a meat diet the fecal examinations were discontinued, but of the 50 cases examined, blood was found in the feces in 16, but two of these cases must be excluded. Of the 14 cases, 7 were severe (1 death), 3 moderately severe, and 4 slight. Of the 34 cases in which no blood was found, 11 were severe, 15 moderate, and 8 slight.

It is important to note that in some of these cases a positive blood reaction was the first warning (sometimes three or four days before) of severe intestinal hemorrhage later; and as far as the anthrax cases go they seem to show that the presence of a positive blood reaction in the feces in cases in which there is evidence of peritonitis is indicative of a perforative peritonitis rather than of peritonitis due to mere extension of the typhoid. The author found that the administration of a mild purgative was liable to be followed by evidence of blood in the feces. The presence of blood tends to show that the reparative process in the bowel is not complete. Lastly, no inference as to the gravity of the case can be drawn from the presence of blood. These chemical traces may be found in light cases as well as in those that are more severe.

Joint Manifestations in Hemophilia.

The importance of the diagnosis of the cause in the joint complications of hemophilia is pointed out by E. W. Ryerson (*Journal of the American Medical Association*, June 23, 1906), who describes the pathologic conditions and the differentiating symptoms. It is probable that many cases go unrecognized, as many bleeders have a disinclination to admit their disability, thus embarrassing the diagnosis. The possibility of hemophilia, therefore, should be kept in mind in doubtful joint affections, and Ryerson believes that a thorough study of the case will then lead to a correct diagnosis. In the first stage aspiration of some of the fluid may be necessary, and he says the procedure is harmless if done with a very small needle and with all proper precautions.

The principal conditions likely to cause confusion in this stage are acute synovitis and intermittent hydrops or hydrarthrosis. In the former there is usually a history of more severe injury, more local pain and tenderness, and the effusion disappears more slowly.

Intermittent hydrops is a very rare disease, characterized by intermittent mild joint effusions occurring without antecedent traumatism, and each attack followed by complete recovery. The various infectious arthrites are much more painful and persistent and attended with more constitutional disturbance; the antecedent disease also suggests the diagnosis. In the hemarthroses of the hemorrhagic diseases, such as purpura, etc., the accompanying petechiæ are indicative of the cause. In the second stage of hemophilic hemarthrosis, with its thickened capsule, limited motion, and beginning flexion, tuberculosis is suggested, but the absence of true spasticity, of free fluid in the joint, and of local tenderness, together with the lack of temperature, help to exclude that disease. Arthritis deformans is distinguished by its slow onset, multiple involvement of joints, and the presence of bony or cartilaginous exostoses. In the third stage the clinical picture may be exactly that of an old tuberculous joint, with complete ankylosis and without evidence of suppuration, and a complete history of the case may be required. Before operating on any old ankylosis in which hemophilia cannot be positively excluded, a test of the coagulability of the blood should be made. For treatment of the first stage, Ryerson advises aspiration with a fine needle, followed by injection of adrenalin solution and a bandage for six hours. Use of the joint and massage are advised if aspiration cannot be done. No fixation should be used after the first day. In the later stages with a tendency to flexion, traction, followed by a splint or cast, is advised. Ankylosis in flexion might be corrected by forcible measures, but any cutting operation must be sedulously avoided.

Functional Psychoses.

E. Wendell (*Journal of Nervous and Mental Diseases,* April, 1906) emphasizes the importance of medical watchfulness for the children of nervous parents, and of careful regulation of the manner of living, especially if the children show any nervous tendency. It is often wise, especially as puberty approaches, to take such children away from a home where the atmosphere is

not favorable for combating the tendency, and place them in the country or in a small town, where the life will be simpler. Their diet should consist largely of eggs, milk, and fruit. In case of sleeplessness drugs should be a last resort, after massage and hydrotherapeutic measures have been thoroughly tried. A patient who refuses food may sometimes be tempted to eat when unobserved if a glass of milk or crackers and bouillon are left on a table near his bed. Patients who soil themselves should be taken to the closet frequently, and the amount of fluid ingested restricted. For melancholia he depends chiefly upon opium, gradually increasing the doses and then decreasing. His maximum dose is one gramme, supplemented by rest in bed and strengthening diet.

Cases of Intubation of the Larynx in Diphtheric Dyspnea.

G. B. McCaul (*Dublin Journal of Medical Science,* May, 1906) gives the following advantages of intubation: (1) Great diminution in the mortality compared with tracheotomy, especially during the first three years of life. After the sixth year tracheotomy is usually preferable. (2) The absence of a wound in the neck. (3) The rapidity with which it can be performed. (4) The slight danger of subsequent pneumonia. (5) The ease of performance compared with tracheotomy. (6) The small amount of subsequent care required. The disadvantages of this operation are: (1) Risk of dislodgment of the false membrane by the tube while being inserted with danger of suffocation before tracheotomy could be performed. (2) Danger that the tube may be coughed up and asphyxia result before it could be replaced. (3) Difficulty of removing the detached membrane through the tube. (4) If pneumonia develops it is impossible to keep the tube free from the viscid secretion, which thus increases the dyspnea.

The Examination of the Spinal Fluid in Dementia Paralytica.

Paul B. Brooks (*Medical Record,* June 30, 1906) does not believe that it is yet possible to make a positive diagnosis of dementia paralytica from the etiological examination of the spinal fluid. Nevertheless, he thinks that this examination bids fair to become a valuable aid to diagnosis in some doubtful cases.

It is also frequently of use in other conditions, such as meningeal syphilis associated with meningitis. The writer has made satisfactory examinations of fluid in twenty-nine cases. Thirteen of these have been typical paretics, three probable paretics, while thirteen suffered from other conditions. Sixty-eight and three-quarters per cent of the paretics showed an abnormal lymphocytosis, while the lymphocytes were normal in number in 82⅔ per cent of the cases other than paresis. The amount of serum-albumin varied and seemed to bear no particular relation to the number of lymphocytes or to the presence or absence of dementia paralytica. A reduction of Fehling's solution was obtained in but one case

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What Has Surgery Left to Medicine in the Treatment of Peritonitis in Adults and Children?

Henry W. Berg (*Medical Record,* June 30, 1906) says that the object of this paper is to show that while surgery is the stronghold in the therapy of peritonitis, medicine, with the basic knowledge as to diagnosis, pathogenesis, and etiology which it has developed in the past few years concerning this affection, has laid the groundwork for successful surgical therapy, and has amplified the purely medical curative resources to an appreciable, if more limited, extent. Although the preponderance of opinion seems to be in favor of the treatment of tuberculous peritonitis by surgical means, some cases improve under the ordinary medical régime suitable for tuberculous patients. The latter method of treatment is indicated in cases of advanced pulmonary tuberculosis to the exclusion of surgical methods. In cases in which tuberculous peritonitis is the prominent lesion, especially when there is a fluid or semifluid effusion, or if the tumor masses are seriously embarrassing to the patient, laparotomy is the treatment of choice.

Pulmonary Tuberculosis in its Relation to Obstetrics.

Frank H. Washburn (*American Medicine,* June, 1906) says that active pulmonary tuberculosis and pregnancy constitute a dangerous complication. Pregnancy exerts an unfavorable influence on pulmonary tuberculosis, both immediately and remotely during the puerperium. Measures should be taken to prevent the complication in women who are subjects of active tuberculosis. These measures may include the avoidance of marriage and the

prevention of conception. If the principle involved in the question of interrupting pregnancy is right, there are, occasionally, indications in the cases under consideration. Artificial sterilization is of doubtful utility. Obstetric tuberculosis could be best treated in special institutions, for which a field exists.

Pneumococcic Peritonitis.

Robbers (*Deutsche med. Wochenschrift*, 23, 1906) cites three cases, all of which recovered after drainage of the abscess. Two of the patients were women, the other a girl six years old. Pneumococcic peritonitis has never been known to heal spontaneously in an adult. The writer remarks that if the condition is diagnosed early, either by finding the pneumococcus in the blood or clinically, it would be well to inject antipneumococcic serum. In children pneumococcic peritonitis sometimes heals spontaneously, but surgical measures should not be delayed until the patient's health is seriously impaired.

Nutritive Value of Fish.

Rasenfeldt (*Centralbl. für Innere Med.*, No. 7, 1906) experimented on two students to determine the relative nutritive values of fish and beef. The results showed that the fish satiated as well as the beef; it also produced a similar amount of uric acid, and equally sustained the powers of endurance. The author is of the opinion that fish is on a par with beef as a food for the public, the athlete, and the army.

THERAPEUTICS.

The Lenhartz Treatment of Gastric Ulcer.

J. V. Haberman (*Medical Record*, June 16, 1906) in describing the Lenhartz treatment says that this investigator, in his search for a diet for cases of gastric ulcer, tried concentrated egg-albumen diet. It was especially desired to combat the hyperchlorhydria, reënforcing at the same time the enfeebled and anemic condition of the patient. The concentrated egg-albumen diet, after being tried in many cases, was followed by such excellent results that this method became the routine hospital treatment at the Eppendorfer Krankenhaus. The writer gives the

following tabulated treatment of gastric ulcer: Absolute rest in bed for at least four weeks; avoidance of all mental excitement; the almost continual use of an ice-bag over the stomach for two weeks; the administration of between 200 and 300 cubic centimeters of iced milk, given in spoonfuls, and two to four beaten eggs; the administration for ten days of 2 grammes of bismuth subnitrate at a dose. The eggs are beaten up entire, with a little sugar, and the dish containing them is placed in a receptacle filled with ice; sometimes a little wine is added. This food at once "binds" the supersecretive acid, mitigates the pain, and causes the vomiting to cease. After a few days some raw chopped meat is given. In the third week quite a mixed diet is allowable.

Serotherapy in Puerperal Sepsis.

A. Eggel (*British Gynecological Journal*, February, 1906) reports upon the effects of antistreptococcic serum in ten cases of the severest puerperal infection. In two instances, which from the first had all the characteristics of general septicemia without any tendency to localization, and which from the fourth and fifth days respectively were treated with large doses (amounting to 140 and 160 cubic centimeters on the whole), the success was most brilliant, and not inferior in effect to the known action of diphtheric serum, either in regard to improving the subjective state of the patient or reducing the temperature. The treatment was purposely confined almost exclusively to the serum, and the truth of this statement is evident from the curves of temperature and pulse which Eggel shows. In three other cases also which were instances of the hematogenous form of puerperal infection without definite localization, the serum was found to have a decidedly beneficial effect on the temperature and on the course of the disease generally. Among the remaining cases in which the serum had no effect was one of severe pyemia ending fatally, in which, from want of experience, the doses injected were evidently too small; there were two other fatal cases—one from purulent peritonitis, in which a perimetric abscess was formed, and one which was withdrawn from treatment after the first injection had been given, apparently with good effect, and which ended fatally much later under symptoms of pyemia. No evil effects could be attributed to the injection of the serum, except urticarious eruptions and some days muscular pain, in two patients only.

The Intramuscular Injection Treatment of Constitutional Syphilis.

H. R. Fowler (*Dublin Journal of Medical Science,* May, 1906) gives the following advantages of this method: (1) Certainty of absorption; (2) accuracy of dosage; (3) rapidity of mercurial saturation; (4) less time in hospital; (5) diagnostic value, as in differentiation of a gumma from a malignant growth; (6) absence of consequent gastrointestinal disorder; (7) relief from the use of internal medicines; (8) ability to keep patients under control and observation. The disadvantages of the method are: (1) Those which are common to all forms of mercurial administration, but to a lesser degree; (2) pain, which varies with the susceptibility of the patient, the substance used, and the manner of injection; (3) danger of the occurrence of infiltrations, abscesses, fat embolism of the lungs; (4) mercurial stasis, in which the mercury ceases to be absorbed and eliminated and may be a menace to the patient.

Iodoform in Leprosy.

Diesing (*Deutsche med. Wochenschrift,* 23, 1906) previously reported the treatment of two cases of leprosy with subcutaneous injections of iodoform, and now reports three more. His treatment consists of a 30-per-cent solution of iodoform in olive oil, injecting two to eight cubic centimeters for from six to twelve weeks. After two weeks the nodules begin to decrease in size. The drug was well borne by the patients, and the writer has been able to increase the dose of the Pharmacopœia 150 per cent without bad symptoms. He urges the trial of this intensive treatment in tuberculous cases.

Treatment of Intermittent Claudication, Due to Arteriosclerosis of the Extremities.

R. H. Irish (*Albany Medical Annals,* July, 1906) says that rest is frequently the most important element. The patient should never exceed the time limit—that is, the time when symptoms of claudication first appear after beginning exercise, as in walking. In a severe case complete rest in bed for a few weeks has been found to be of decided benefit. Of internal remedies sodium and potassium iodide occupy first place, as in other condi-

tions of arteriosclerosis. Nitroglycerin is also used in this condition, but from his personal experience with its use in other conditions of arteriosclerosis he would consider it of doubtful value. In the presence of other neurotic symptoms bromides are indicated. Of local measures the following are most important: keeping the parts well protected from the cold, local hot salt water baths, and galvanism.

Treatment of Late Diphtheric Paralysis by Injections of Antitoxic Serum.

At a recent meeting of the Paris Société Médicale des Hôpitaux, M. Comby (*Lancet,* July 7, 1906) described the case of a girl, aged four years, who suffered from diphtheric paralysis of all four limbs and of the pharynx, coming on about a month after recovery from an attack of diphtheria in the throat. After four injections of antitoxic serum repeated at intervals of three days she made a complete and very quick recovery. M. Barbier said it was not uncommon for patients, especially adults, some days or weeks after an attack of diphtheria affecting the throat to die suddenly or after a short illness from bulbar paralysis. The patients most liable to suffer in this way were either those whose treatment was undertaken too late or was otherwise unsatisfactory, or those who were attacked with the severe pseudomembranous form of diphtheria. The symptoms which preceded bulbar paralysis were mental depression, anxiety, prostration, and tachycardia. The only treatment consisted in the immediate giving of a new series of injections of antitoxic serum.

Treatment of Chronic Diseases of the Heart by Nauheim Methods.

F. P. Kinnicutt (*Medical Record,* May 19, 1906) gives the chief constituents of the Nauheim springs as chloride of sodium, chloride of calcium, and carbonic acid gas, free and in combination. As the baths vary in their different constituents they are known as the ordinary brine bath, the thermal brine bath, the thermal effervescent bath, the effervescent bath, the current thermal brine bath, and current effervescent bath. The course of baths usually begins with the brine or the thermal brine bath, strengthened after a short time by the addition of gradually increasing quantities of motherlye. The Schott resistance exer-

cises are used in connection with the baths. The most brilliant successes in the writer's experience are obtained in cases of enfeebled, relaxed, dilated hearts, with or without a murmur, with muscular or relative mitral incompetence following prolonged and exhausting diseases, the various acute infectious diseases, and also associated with anemia of varied causation.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Malarial Keratitis.

E. C. Ellett (*Journal of the American Medical Association,* June 30, 1906) remarks that this disease, which consists in a branching linear ulcer of the cornea, best manifested by staining with fluorescein, with variable surrounding infiltration, is an unusual complication of malarial disorders. It occurs most commonly in late summer and autumn, is never multiple, is very rare in the chronic forms of malaria, rarely occurs in both eyes, and not infrequently causes serious damage to the cornea. One attack predisposes to others, but not invariably. He believes that the lesions are probably trophic, and that they follow the nerve fibers of the cornea, and the fact that the corneal nerves lose their sheaths after penetrating about one millimeter from the corneoscleral junction may possibly explain why the lesions never reach the edge of the cornea, but follow only the unprotected course of the nerves.

As regards treatment, he says that the general condition should be looked after, and a change of climate may be necessary. While he cannot say that he has seen striking results from quinine, it is nevertheless considered a necessary medication. Postmalarial anemia may call for iron, and blood examinations may be a valuable aid. Locally, an antiseptic wash and atropine should be always used and the eye protected. The most striking results will often follow the application of tincture of iodine, but this is very painful, even with cocainization and immediate irrigation, and is not always beneficial. Hot applications are useful and grateful to the patient. When the epithelium is regenerated, yellow oxide ointment or some similar preparation should be used to lessen the opacity. Refraction should be looked after, and proper glasses supplied as needed.

GYNECOLOGY AND OBSTETRICS.

A New Mode of Treating Prolapse of the Uterus.

A. Kiriak (*British Gynecological Journal,* February, 1906) proposes a new method, which he calls colpohysterocervipexy, of treating prolapse, when for any reason it is not possible to perform a laparotomy. He fixes the uterus to the undescended part of the vagina in the following way: The uterus is drawn out of the vulva, and a cuff of the mucosa 2 or 3 centimeters broad is dissected off the portion above the external os; the uterus is then thrust upward with a sterile compress, and a similar cuff is dissected out of the vaginal mucosa near the introitus. The raw surfaces are then brought into apposition and secured by suitable stitching. As there is some difficulty in dissecting off the cuffs of mucosa, Kiriak in future intends to freshen the two surfaces by the action of caustic potash, and unite the parts with sutures after the scabs have come away.

Early Diagnosis of Malignant Disease.

A. A. Landry (*New Orleans Medical and Surgical Journal,* June, 1906) gives the following characteristics suggestive of early malignancy of tumors of the uterus, stomach, and breast: (1) Rapid growth. (2) Tendency of the tumor to invade surrounding tissues. (3) Pain, spontaneous, and of a lancinating and paroxysmal character, was long considered characteristic of malignancy, but is misleading. Pain is not characteristic of early cancer. (4) Too much importance should not be given to retraction of the nipple in cancer of the breast. Redness, edema, nodular development, ulceration, involvement of lymphatic glands, and the development of the characteristic cachexia are late symptoms which should not be waited for before having recourse to radical treatment. Early examination in suspected cancer of the uterus and an early resort to exploratory operation in suspected cancer of the stomach are to be recommended.

The Figure-of-eight Suture After Laparotomy.

B. Hannes (*Zeit. f. Geb. u. Gyn.,* No. 3, 1906), on the basis of his experience in Kuestner's clinic since 1901, strongly recommends Heppner's figure-of-eight suture with aluminum-bronze

wire for closing the abdominal wound after laparotomy; the smaller loop includes the edges of the fascia, the larger those of the skin. A comparison of cases so treated with earlier laparotomies in which catgut suture in three layers was employed proves the superiority of the figure-of-eight. The number of hernias was reduced by one-half.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Treatment of Lupus.

E. Lesser (*Zeit. für Phys. und Diat. Therap.; British Medical Journal*, July 7, 1906) discusses the treatment of lupus by means of the Finsen concentrated light and of Roentgen rays. The value of a treatment of lupus is to be estimated according as it fulfils two requirements: first, that of destroying the diseased parts, and secondly, of sparing all sound tissue. In so far as these conditions are fulfilled a good result will be arrived at, both from the point of view of complete recovery and of a good cosmetic effect. In certain cases the cosmetic effect is more important than the permanent healing, and, for example, a patient with extensive lupus of the face is more pleased with a good result as regards appearance, even if later from time to time the treatment of slight relapses should be needed, than with a permanent cure if that cure be accompanied by much disfigurement of the face. Histological examination as to the spread of lupus in the skin and subcutaneous tissue shows the difficulty of successful treatment, because in any area of lupus extension of the disease can be made out along the track of the vessels into healthy tissue, while even in regions where the infiltration is fairly dense areas of more or less normal tissue occur between infiltrated parts; an elective power is therefore needed in the means employed. Of the earlier methods of treatment, certain caustics, and especially pyrogallic acid, most nearly answered the above demands, but the newer methods, and especially the Finsen treatment, have surpassed the older procedures, especially with respect to the cosmetic results to be obtained.

The present author at an earlier time was against the Roentgen ray as a sole treatment of lupus, but he has now modified this opinion, and believes that the bad results obtained were due

to a too free use of the rays. There is no doubt that Roentgen rays possess an elective power in a very marked degree. Their use is especially indicated in cases with much infiltration, in cases of lupus elephantiasis, in cases of luxuriant growth and those with extensive ulceration. A combination of Roentgen-ray treatment and of that by Finsen light has also been found most effectual. By means of Roentgen rays the great mass of the lupus infiltrate is destroyed, and later by means of the Finsen light the single small areas can be dealt with. The doses of Roentgen are to be calculated, so that they give rise to an erythema, but never to a moist dermatitis or to ulceration. A few stronger applications of the rays are preferred by the author to many weak ones, but in every case the initial dose should be small in order to allow for any individual peculiarity. In slight cases in which full healing is hoped for, the results with Finsen rays are so good that this treatment is to be preferred to excision as giving rise to the formation of a less obvious scar.

The two conditions which are unfavorable to light treatment are (1) affections of the mucous membranes, and (2) extensive scarring caused by previous active treatment. The mucous membranes of the face are almost inaccessible to the Finsen light treatment, and the Roentgen treatment is only applicable to lupus of the mucous membranes within certain somewhat narrow limits, while lupus nodules lying in the deeper part of thick scar tissue are inaccessible to the light. Very extensive infiltration is another circumstance which makes treatment difficult, and in such cases the Finsen or Roentgen-ray treatment is the only one to give even a moderate result.

The confidence of the public in the new methods of treatment is in itself helpful. The patients tend to come for treatment at an earlier stage than used to be the case—before the face has been scarred by the use of caustics, etc. The scars after the Finsen-light treatment are soft, never keloid, and are accessible to further treatment should a relapse occur. While the Finsen treatment does not make other methods superfluous, it yet takes the first place amongst them. In a great number of cases it leads to permanent recovery, and that with a better cosmetic result than from any other method.

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ORIGINAL CONTRIBUTIONS.

SARCOMA IN INFANCY AND EARLY CHILDHOOD.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Unfortunately for humankind, the etiology of malignant disease still remains submerged in obscurity. Numerous conscientious and painstaking investigators in different parts of the world have faithfully labored for years endeavoring to solve the problem, but there is yet no consensus of opinion as to the *fons et origo mali*. At one time, in the not far remote past, age was presumed to be the most important predisposing causative factor —*i.e.*, maladies of a malignant nature did not attack the young— but the fallacy of this view has long since been clearly demonstrated, and it is now well known that malignant disease, particularly sarcoma, is encountered quite as frequently during infancy, early childhood, and adolescence as in adult life and old age. Carcinoma, however, is observed more rarely, although it is by no means unknown in those of tender age.

In a review of this scope and character it would be distinctly inappropriate to indulge in lengthy speculation upon the various etiological theories which have been accorded more or less professional prominence, since rehearsal of theoretical propositions would not materially contribute to elucidation of observed facts; but it may be said, *en passant*, that the microörganismic (or parasitic) theory has much to recommend its general acceptance, although in the light of present knowledge it may be entirely insusceptible of adequate demonstration.

The statement requires no emphasis that any organ, structure, or tissue of the human body may be attacked by malignant disease in either infancy or old age, and why in one instance the energy of the process should be expended upon one certain organ or part, and in another upon remote and entirely different organs or structures, are observed facts which are incapable of satisfac-

tory explanation upon any hypothesis thus far suggested. That the uterus, the breast, the lips, etc., are attacked with greater frequency than other organs or tissues is of no especial interest in connection with this dissertation, except to remark that adult percentages when applied to infancy and early childhood do not appear to hold good, the reasons for which are obvious.

Since it would be quite impossible in one short paper to present an intelligent review of the entire subject of malignant disease, even in its relation to infancy and childhood, the writer will select for consideration the most common type, viz., sarcoma. Hundreds of cases of sarcoma in the young have been recorded, of which a few of the most illustrative will be cited in abstract.

Cumston states that he knows of no instance where primary carcinoma of the vagina was encountered under the age of twenty. On the other hand, sarcoma of the vagina in early childhood is not so rare—*e.g.,* Carpenter found record of twenty cases in children under twelve years, and says vaginal sarcoma is usually seen as multiple polypi, sessile or pedunculated, of firm consistence, or even gelatinous; that these polypi do not ulcerate —as a rule the inguinal and lumbar lymphatics are unaffected, the course of the disease is chronic, and the result fatal. The uterus and bladder may be invaded and present polypoid excrescences; the rectovaginal and vesicovaginal septa, likewise the connective tissue at either side of the vagina, and the broad ligaments, may be attacked by the process. The rectum does not usually become involved.

So far as the writer has been able to ascertain, there have been but about sixty cases of gastric sarcoma recorded, the majority of which were in adult life. However, Finlayson reports a case of sarcoma of the stomach in a child of three and a half years. The case during life was a clinical puzzle, and after death proved to be a pathological rarity. Sarcoma involving the stomach, says the author, is uncommon at any age, and in early life it is extremely rare.

Acker presented before the American Pediatric Society specimens of sarcoma of the thymus and bronchial glands from a girl of seven whose brother and sister had hereditary syphilis. For five weeks the child had lost flesh, and a large swelling developed on the right side of the neck. The left side to the waist and the left side of the face and head became edematous. The left arm was enormously swollen. The next day the right side of the face and right arm began to swell, and death closed the scene. Autopsy showed the left mammary region infiltrated with fatty

tissue; the left axillary space contained a large growth which extended over the clavicle, pressing upon the left subclavian vein, and the right axilla presented a somewhat smaller growth; there was a large, soft, lobulated tumor in the superior mediastinum surrounding the trachea and great vessels and extending to and involving part of the upper lobe of the left lung. Microscopical examination showed the growths to be large round-celled sarcomas.

Fischer reported to the New York Academy of Medicine a case of sarcoma of the lung and presented a microscopical specimen from the tumor. The growth occupied the normal site of the heart, which had been pushed to the right axillary space, the apex beat being heard two fingerbreadths below and to the right of the (right) nipple. The chief clinical features of interest present were rapid, irregular, and sighing respiration; temperature over 100° F.; constant and severe dyspnea; more or less cyanosis; pallor of the mucous membranes; rapid emaciation. There was also a lateral curvature of the spine (from left to right) in the dorsal region. The case was hopeless from a medical standpoint. The father and mother of the child were apparently normal, but the grandfather died from a sarcoma.

Le Conte, after reporting two cases of nephrectomy for sarcoma of the kidney in children with operative recovery, concludes:

1. With modern methods the immediate mortality of the operation should be reduced to 15 per cent or even lower.

2. Operation should prolong the average duration of life, dating from the first symptom of the disease.

3. The percentage of cases that will go three years or more without recurrence, the so-called cures, will be greatly increased if the physician can make an early diagnosis and can be assured of the fact that an immediate operation is proper and justifiable.

4. When the ultimate results are fatal the operation relieves the suffering of the patient, and makes death less painful.

At present the status of the operation is certainly much better than the English opinion of it, as voiced by Keith, who states that in young children it is doubtful whether it is ever right to operate; indeed, such operations must be looked upon as surgical possibilities rather than as operations of advantage to the patient. By way of retort Abbe might point with pride to two of his operative cases, one aged fourteen months, the other two and a half years, both of whom were living and well at the end of three and a half and four years respectively.

McKay records a case of sarcoma of the humerus removed by interscapulothoracic amputation. The patient, a boy aged eleven, five weeks previously had fallen from a vehicle, alighting on his right shoulder. A few weeks thereafter a swelling was noted in the deltoid region, which rapidly increased in size, but there was little or no pain. Being unwilling to subject the patient to an extensive operation (as it was the right arm) without being absolutely certain of the diagnosis, an incision was made into the tumor and a small portion removed, cut sections of which proved it to be a sarcoma. The interscapulothoracic operation was then performed, the subclavian artery and the axillary vein being ligated after the pectoral muscles had been reflected. The patient recovered.

Pepper read before the Philadelphia Pediatric Society a paper on congenital sarcoma of the liver and suprarenal, and reported the case of a female child, apparently normal at birth, who was found at the age of three and a half weeks to have an enlarged abdomen, which increased markedly until death at six and a half weeks. Autopsy revealed the right suprarenal the size of an English walnut, firm and hemorrhagic; the liver was the seat of an infiltrating growth and weighed two pounds eight ounces; the capsule was smooth and mottled (marbled) in appearance. On section it was found uniformly infiltrated by the growth to such an extent that scarcely any hepatic tissue could be detected. The other organs were normal; there were no other secondary growths. The tumor was a lymphosarcoma.

A thorough search of the literature revealed five other similar cases, recorded by Heaton, Orr, Parker, de Ruyter, and Meisenbach. All these cases occurred in the first weeks of life; all died within a few weeks; all had enormously enlarged livers which were infiltrated with a sarcomatous growth; three had also the suprarenals involved; one had a secondary growth lying between the spleen and kidney (suprarenal). There were no other secondary deposits in any of the cases. Four were females; in one the sex was not stated.

Simons operated by abdominal section upon a female child aged four years and nine months, removing a papillomatous cyst the size of an adult head which had developed rapidly. The only symptoms were vague, transitory pains in the abdomen, loss of appetite, anemia, icterus, some elevation of temperature, and gradually increasing abdominal enlargement. Palpation revealed the abdomen filled with fluid, and a solid mass was detected, most prominent at the umbilical region, pressing toward

the right side. There was dulness in every direction on percussion, so that it was impossible to clearly distinguish the outlines of the tumor. Sarcoma of the kidney was suspected. On examination under chloroform the tumor was found to occupy almost the entire abdominal cavity from the brim of the pelvis to the diaphragm. The surface was more or less irregular, and palpation showed a semisolid consistence. Median incision was made, and a quantity of ascitic fluid immediately escaped. The cyst was found attached to the anterior abdominal wall and the omentum, and by a thin pedicle three inches in width to the right lateral wall of the pelvis. The cyst walls were friable, and its cavity filled to the utmost capacity by a papillary growth presenting a cauliflower appearance. There was no elevation of temperature after the operation, and the child made a prompt and satisfactory recovery. Histologically the mass consisted of papillomatous cysts containing mucoid material; the stroma was mixed, both adult and embryonic connective tissue being present, also bundles of unstriped muscle and plates of cartilage. The stroma in certain places looked decidedly sarcomatous.

As an instructive example of tumors to be considered in and about the uterus in infancy, Lorthioir cites one of sarcoma in a child three years old. In December a small fibrous mass, apparently a fibroma, was removed from the cervix; in March a partial vaginal hysterectomy by morcellement was performed; in June a total ablation of the uterine stump and appendages by the abdominal route for an enormous recurrence which filled the true pelvis. Death occurred from shock. Autopsy showed involvement of the mesenteric glands. Microscopically the first tumor removed was fibroid, and all the tissue ablated at the other operations was more or less sarcomatous, with small round cells.

There was presented before the New York Academy of Medicine by Stowell a tumor of the liver removed from an infant aged nine and a half months. A nodulated oblong growth extending from the epigastrium to the pubes, filling the left side of the abdomen, had been noted but four weeks previously. It was at first thought to be the spleen. About the same time a cystic tumor appeared at the angle of the lower jaw. It contained bloody fluid, and the microscope showed the presence of some large cells. The blood of the child contained 85 per cent of hemoglobin; the white cells were not increased. The urine contained a trace of albumin and some waxy casts. Autopsy was permitted twenty-four hours after death. There was marked emaciation: no ascites present. Liver filled the abdominal cavity

and weighed two and a half pounds, nearly double the normal weight of the organ for an infant of that age; the left lobe was three times the size of the right, and consisted entirely of an abnormal growth; the right lobe was infiltrated; there were no adhesions to the surrounding organs. Heart, spleen, and lungs normal; kidneys congested, but otherwise normal. Sections of the liver showed increase of fibrous tissue, particularly on the surface; there was also marked increase in the cells in the interior; some of these were large and spindle-shaped, but the majority were small round cells. The diagnosis was fibrosarcoma.*

The author said that sarcoma of the liver in children was rare. He had found only ten cases reported. The youngest was in a child of three weeks. Emaciation is usually marked, and ascites ordinarily absent, but gastroenteric disturbances are common. Sarcoma is the commonest of the malignant growths in childhood. It attacks any part of the body where there is connective tissue. Sarcoma always develops from the mesoblast, while cancer arises from the epiblast or hypoblast. Sarcoma travels by the blood-vessels, while carcinoma travels by the lymph channels.

Churchill saw a child who had been well up to the third month of life, when it was noticed that the abdomen on the left side was beginning to enlarge. This continued, and had been especially rapid during the last few weeks. Diagnosis of sarcoma of the kidney was made, and an unfavorable prognosis given. At the earnest solicitation of the parents an operation was performed, and the growth removed weighed over three pounds. The chief interest in malignant tumors of the kidney in children, says the author, is their etiology. The view generally accepted is that of Cohnheim, that they are of congenital origin due to misplaced embryonic tissue.

Packard cites the case of a child aged three and a half years who had multiple sarcomata. There was a tumor in the left thigh, another over the left scapula, and a third at the angle of the jaw which later extended to the neck; the masses slowly increased in size. Sections were taken from two of the tumors and submitted to minute investigation. They were shown to be typical round-celled alveolar sarcoma. Later there appeared a group of globular tumors, apparently matted together, on the right side of the neck below the angle of the jaw; a large mass of enlarged glands filled the left axillary space; the left scapular region was prominent from the presence of two large masses

*A duplicate of this case was observed by Dr. Carr.—H.

firmly attached to the bone, or to the supraspinous and infraspinous muscles, and separated by a sulcus over the scapular spine. There was also felt a tumor the size of a duck's egg in the left iliac region.

A round-celled sarcoma of the ovary the size of a man's head was removed from a thirteen-year-old girl by Rohrig. The tumor was of rapid growth; there were no metastases; a moderate degree of ascites coexisted.

Homans records a case of sarcoma of the cecum in a girl five years old. The tumor, including about an inch of the anterior wall of the cecum and a portion of the ileocecal valve, was removed. Microscopic examination showed the growth to be made up of small spindle cells with a little homogeneous intercellular substance, and with the blood circulating in sinuses without definite walls. The diagnosis was made of spindle-celled sarcoma originating in tissue about the intestine. The child is said to have made a good operative recovery.

The writer's principal object in citing the foregoing instances of sarcoma in infancy and early childhood is to emphasize the following facts:

The course of malignant disease in the young differs in no essential respect from that which is observed in adult life under similar conditions.

Likewise the result of medical, mechanical, or operative treatment is practically identical, it matters not at what period in life the disease occurs.

The prognosis in malignant disease, whether it be in old age or infancy, is always exceedingly grave, no matter what may be the circumstances.

Complete and permanent restoration to health by any method of treatment—surgical, medical, mechanical, or otherwise—while a consummation devoutly to be wished, is seldom attainable even under most favorable and promising conditions.

It is an indisputable fact, however, that in rare instances undoubted malignant disease in certain situations has been completely and permanently eliminated by medicinal, mechanical, and surgical means; but *in rerum naturæ* the percentage of permanent cures will always remain inconsiderable compared with results obtained in other diseases.

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HEMIANOPIA.

BY A. S. M. CHISHOLM, M.D., BENNINGTON, VT.

In the following paper I purposely refrain from the intimate consideration of those cases of hemianopia in which this appears as a symptom of hemiplegia or meningitis or embolism of the retinal arteries, and restrict myself to the discussion of the functional form which often prevails even in the midst of structural lesions in the brain. Nettleship, for one, regards every case of hemianopia as symptomatic in cerebral disease, and refrains from recognition of the functional form. That this is not the case I shall, among other things, endeavor to show.

The name hemianopia has very properly replaced that of hemiopia, suggested first by Wollaston, inasmuch as the peculiarity of the condition consists not in the fact that we can see half an object, but in the converse one that there is a half that we cannot see. This invisible area is usually the lateral half of the visual field.

The condition is by no means rare, but its onset is so unexpected, its continuance so brief, and its most interesting symptoms so fugacious, that the patient fails to note and the physician to discover one of the most suggestive of morbid phenomena, while brief allusions in the text-books and scanty notices in the medical journals are all that the most painstaking industry can unearth from the written records.

A typical case from my note-book may serve as a text for what I shall have to say concerning it.

The first case was a student, who while preparing for June examinations often went without his dinner, that he might have an extra hour for study. One day he had occasion to get a book from a bookcase, so he arose and walked across the room, but when he looked for his book he found that the left half of the title had disappeared completely as he looked at it. Some confusion of vision had preceded this, but he ascribed it to fatigue, and applied himself the more closely to his work. Now, however, he walked back to his seat and experimented with himself. He found that with either eye open the defect still occupied exactly the left lateral half of the visual field. After a few minutes he noticed a flickering like the undulation of heat waves, which began at the vertical border of the obscurity and rapidly extended until the whole blank half of the visual field seemed in

rapid motion. No words or objects of any kind appeared through this wavering obscurity. The flickering lines undulated rapidly, tremulous; some were green and some yellow. All were luminous, and as distinct on closing the eyes as on opening them. On passing through the street the right half only of the shop signs could be seen. The people had only half faces. He continually jostled persons whom he could not see. They were at his left side; they were invisible. The flickering increased steadily for about half an hour, at no time passing the vertical axis of vision. Then it began rapidly to abate, and an intense supraorbital pain supervened. In an hour the visual field was again clear, but objects were confused, and accommodation for near objects was difficult and could not be maintained for more than a moment or two. During the attack his pulse was slow and regular, and the temperature normal. During a subsequent attack he was examined by Dr. Wadsworth, who reported his retinæ perfectly normal.

In Wollaston's case there were two attacks that he recorded. In the first attack there was left hemianopia, and in the second there was right hemianopia. The symptoms attending these two attacks were like those of the case I have just reported, except that the second attack was abruptly terminated "by the excitement produced by the agreeable news of the happy return of a friend engaged in a dangerous enterprise." Four years after the second attack Wollaston died, and the necropsy showed that the right tubercula quadrigemina had disappeared entirely and were replaced by a neoplasm.

The third case—from my own note-book—was that of a young man of marked nervous temperament, a teacher in a public school. In this case the patient persisted in ascribing his symptoms to a dose of cannabis indica that he had taken for a headache. Headaches he had often had, but never hemianopia. The first thing that had attracted his attention was the disappearance of the upper part of the field of vision, the lower half remaining perfectly distinct, so that by directing his vision to a line that would run along the tops of the letters he could continue to read. The rest of the record of this case presents only a repetition of the appearances in the first case, so far as he remarked them.

Of course, not all cases of partial amaurosis can be called hemianopia. Dr. Williams, of Boston, however, reports a case under the title hemianopia in which the existence of interretinal fibers might be corroborated if it were not now heresy to speak of them. In Dr. Williams's case the nasal side of each retina

was paralyzed. In this case near vision should have been normal within the point where the divergence of the eyes in accommodation for distant vision causes the rays to fall upon the insensitive part. This, however, was never for a moment a case of hemianopia. It was a case of syphilis, which recovered under appropriate specific treatment.

Professor Förster describes a case of his own in which a blot of blindness occurred in the center of the visual field, varying in place from one moment to another while it lasted, but always occupying the same part of the field in both eyes.

These cases, then, represent all the varieties that it is necessary to dwell upon in the elucidation of our theme. Other names, mainly descriptive, have been given to this condition. Professor Förster, of Breslau, described it under the name "Amaurosis Partialis Fagax;" Listing called it "Flimmerskotom;" Dr. Hubert Avery named it similarly "Flickering Scotoma." All these cases present the same general appearances as the first case above. The same sudden onset, the same visual phenomena, the same sequelæ of nausea, marked physical and mental exhaustion, and a hemicrania which lasted twelve to twenty-four hours.

Of course, necropsies are not be obtained upon such cases as are unassociated with organic changes, and one must accept with caution conclusions drawn from such cases as have presented these appearances and have terminated fatally. The result of the necropsy in the case of Wollaston showed that the right natis and testis were replaced with a tumor. He had, as will be remembered, first left, and then right, hemianopia. In a case of left hemianopia reported by Dr. E. H. Linnell the necropsy showed a large, firm coagulum in the medullary substance of the right hemisphere surrounded by a thin envelope of softening. The right tubercula quadrigemina were also the seat of softening.

Dr. J. Hughlings Jackson also reports a necropsy on a case of left hemianopia with right hemiplegia in which he found a softened area in the right optic thalamus. He regarded it as remarkable that the hemianopia should occur on the same side as the hemiplegia, but it was what he should have expected inasmuch as left hemianopia means insensibility of the right half of the retina.

Why are symmetrical halves of the retinæ affected? Pathology, of course, refers us to the origin and distribution of the fibers of the optic nerves, whose history I shall recapitulate for the purpose of making a subsequent reflection.

"Since the days of Galen," says Sir Charles Bell, "it has

been a disputed point whether there is a union simply of nerves or a decussation. Fishes have the nerve arising from one side of the brain passing to the eye of the other side; they cross, but do not unite. Birds have but one optic nerve arising from the brain, which splits and forms the right and left optic nerves. Vesalius dissected a young man at Padua who had lost his eye a year before; at the same time he dissected a woman whose eye had been lost a long while. In the latter he found the nerve of that side smaller, firmer, and of a reddish color through all its extent. In the young man he observed no effect upon the nerve. He also gives a plate of an instance in which he found the optic nerve pass on to the eye of the same side from which they take their origin without adhering at all.

"Valverde, a physician of Spain, who traveled into Italy and studied the works of Vesalius and human dissection, says that at Venice he had frequent opportunities of assuring himself that there was no decussation; for robbers were punished for the first offense by losing one of their eyes, and for the second with death. Riolinus, Rolefinkius, and Santorini give observations of their having traced the nerves past their union to the same side of the brain with the eye to which they belonged. Vicq d'Azyr, who of all authors I conceive to be the best authority upon such subjects, is decidedly of opinion that there is no decussation. Zin also agrees with the opinion that there is an adhesion and intimate union of substance, but no crossing of the nerves. Soemmerring deems it sufficient to point out the authorities on both sides of the question, while he himself expresses no decided opinion upon it."

Sir Charles Bell himself, while evidently admiring Soemmerring's neutrality, arrays himself on the side that he advocates, and pictures the optic commissure as a mere conventionality—a superficial courtesy between the two nerves which meet, salute, and pass each on its own way.

On the other hand, toward the close of the last century, Wm. Cheselden, the originator of the operation of lateral lithotomy, writes: "The two optic nerves, soon after they arise out of the brain, join and seem perfectly united; yet I am not without suspicion of their fibers being preserved distinct, and that the nerve of each eye arises wholly from the opposite side of the brain."

The dictum of Sir Isaac Newton, however, persisted and prevailed in spite of the opinion of such renowned anatomists and surgeons. He had declared his belief in the semidecussation of the optic nerves, and after being lost sight of for so many years

it was again asserted, and obtained such universal credence that it became capable of supporting the theory of purely suppositious intercerebral and interretinal fibers.

The last word has been said for the present by Thomas Dwight, with whom all recent authorities, so far as I know, concur. He says: "The question of decussation of the fibers in the chiasm is of some practical interest to the ophthalmologist. It was formerly believed that some fibers from each optic tract crossed over to the opposite side, while more external ones kept to the original side; also that there are commissures of fibers between the two tracts at the back of the chiasm, and corresponding ones between the retinæ in front of it. This arrangement was expressed by a charmingly symmetrical diagram." "A few years ago Biesiadecki demonstrated, as he supposed, total decussation, and later other observers came to similar results. The latest and the most convincing observations by Gadden show that in man and in animals that have a common field of vision for both eyes there is a partial decussation, and a complete one for those animals in whom the two eyes have different fields. The anterior commissure between the retinæ has been done away with, and it has been demonstrated that the fibers of the posterior one are separated from the chiasm by a layer of gray matter."

Gordinier, in his work on the "Anatomy of the Central Nervous System," amplifies Dr. Dwight's statement by tracing the optic nerve fibers from the retinæ to the various origins of the nerve roots. In reference to the optic tract he says: "Each optic tract contains the fibers from the nasal half of the retina of the opposite eye and from the temporal half of the retina of the same eye."

And now happens a curious reflection which I simply suggest, without taking issue in any way with the eminent anatomists whom I have mentioned from Galen to Gordinier. I have very hastily summarized their theories and dissections, have sketched their position in respect of this matter, and have shown their various and divergent beliefs concerning it. The reflection which I timidly make in passing, without strenuously advocating any of its consequences, is this:

The temporal portion of the retina is stated by Gray and all authorities to occupy 5-9 of that membrane and includes the macula lutea. As we have seen, the nerve of this area passes into the optic tract of the same side without decussation. But the temporal areas are the only parts of the two retinæ which are capable of being directed toward a single object—the only

parts therefore where a common field of vision is possible; so that it seems as if the fibers which cross at the chiasm cannot assist in binocular vision, and anatomists have for centuries discussed a subject of no wider interest than the number of atoms of hydrogen in the molecule of area.

To what then is the perception of single objects due? It has been often said that objects would appear double to us if it were not that by the sense of touch we have corrected this impression, and have learned to associate the double impression with the existence of a single object. It would seem that the touch is the most reliable of all our senses.

Cheselden reports a case in which, to use his own words, "a gentleman who from a blow on the head had one eye distorted found every object appear double, but by degrees the most familiar ones became single, and in time all objects became so without any amendment of the distortion."

No long argument is required to prove this. A common origin of nerve fibers is not necessarily connected with the solution, for the images that fall on the two retinæ are unlike, as is proved by alternately considering any object with each eye separately. These two distinct images blend into a third one, a composite one, to which each normal eye contributes its exact share. It is quite immaterial whether the images differ little or widely. That they differ at all proves the perception of single objects an acquired one. The theory of central localization of ideas—for a movement is an idea that the brain imparts, as a perception is an idea that the brain receives—has its limitations and must not be expected to prove too much.

Nor is it only perceptions that are composite. An organized movement, as the expression of an idea, is due to the concerted action of a group of muscles. Movements of single muscles or twitches of single muscles occur only in disease. The muscles that coöperate to produce a movement as the expression of an idea may be supplied from a single nerve trunk, as the flexor muscles of the forearm, or may be moved by nerves arising from different parts of the brain, as in the muscles of respiration. No more perfect or beautiful illustration of this consensus of action in producing a single idea can be observed than in the case of the internal rectus of one eye with the external rectus of the other, for the nerves supplying them arise from different parts of the brain, have no subsequent connection, go to dissimilar and non-correspondent parts, and yet act in perfect union. It is prob-

able that in birds, which have a distinct field of vision for each eye, this concert between these muscles is not to be observed.

We have, then, this statement of fact. Corresponding areas of the two retinæ have become associated in the perception of single objects. Now it is true as a rule that parts that in health have been associated in function retain this connection during morbid processes—*e.g.*, a whole group of muscles is paralyzed at a time, and not any single muscle out of the group. That is to say, the idea that is represented by the group of muscles is obliterated. But perhaps no part of the body can exhibit a more delicate sympathy, founded upon identity of structure and unity of function, than the two retinæ. I wish I could report a case of hemianopia in a cross-eyed patient, but it would unquestionably corroborate the contention that hemianopia does not depend upon the anatomical relations existing between the fibers of corresponding areas of the two retinæ, but upon their acquired unity of function. Not otherwise may all these varying cases be explained—*i.e.*, where the obscurity passes over various and unexpected, but always corresponding, areas, and is seen in both the right and left field of vision consecutively. Indeed, the cases of Wollaston under any other explanation would present the anomalous phase of a localized lesion producing antagonistic symptoms, for either right or left hemianopia supervening on the other would change the character of both. Moreover, no theory of distribution will adequately account for cases in which, like the second one cited, an upper or a lower part of the field is obscured.

We infer then largely that hemianopia exists as a neurosal condition. This statement brings us in touch with a numerous company of diseases, and while it is uncertain how long the medical profession may be unable to distinguish between mere derangements of function and microscopical or incipient or temporary alterations of structure, yet it is for the present convenient to consider so-called functional disorders as constituting a class by themselves. They include all cases of mere unstable equilibrium of the nervous system or of its parts.

I spoke above of the danger of regarding hemianopia as a usual symptom of a gross structural lesion, and the case of Wollaston cannot on reflection invalidate that statement, for although the autopsy showed a destructive lesion of the corpora quadrigemina, yet the fact that the hemianopia was at first left and afterward right would indicate a variable origin if it were other than a disorder of function. Moreover, the termination

of the second attack in a pleasurable excitement is characteristic of neuroses. A burst of tears may cut short a megrim; tickling the fauces or tying a string about the wrist has brought many an epileptic convulsion to a sudden end. Sternutatories were formerly used largely by the profession in similar cases. Indeed, there is no need to recapitulate facts that are familiar to us all from almost daily experience.

But the similarity of these cures or terminations to the functional neuroses suggests other points of resemblance between them. Handfield Jones pointed out their great similarity. They are even at times mutually convertible. Epilepsy, migraine, asthma, chorea, pertussis, angina pectoris, exhibit this reciprocal or vicarious action. They are also related on the physiological side with healthy processes, and on the pathological with morbid processes not usually regarded as functional. For an instance of the last, Trousseau relates a case of migraine replaced by gout, and states that the articular and the neuralgic affections often alternate in the same person, and that migraine may be the sole manifestation of the diathesis in the offspring of gouty parents. Liveing notices the same convertibility between the same diseases, and these observations, multiplied and extended, have given rise to the conjecture that gout and rheumatism are simple neuroses at bottom. On the physiological side we have all seen cases of yawning, sweating, and hiccough that have become distinctly morbid and have a right to be regarded as diseases. Anger has always been suspected to be a disease. Outbursts of temper in children often are so violent, so periodical in their recurrence, and of so trifling provocation as to resemble epilepsy or insanity, to which, indeed, in later life they often lead. Grief, fear, surprise, have all their pathological aspects. We are familiar with the indescribable cardiac oppression, the contraction of the throat, and the convulsive sobbings and the passion of tears of violent grief. "The chest is dilated, the head erect, and the breathing free under the influence of hope and courage;" the breath is arrested by surprise and expectation. "The heart's action becomes disordered in the palpitation of fear and expectation, tumultuous in joy and surprise, of increased force and frequency in anger, and in grief it fails. There is an aphasia of passion and fear as well as of disease, and a suppression of the voice in terror." The blush of modesty and shame is as pathological as the heat and flushing of anger and the collapse of terror. They all depend upon a disturbance of the nerve balance.

It is a well-known fact that the keenest appetite may be dis-

pelled by ill news, and this may extend to loathing and even to nausea. Fasting has proved an effectual predisponent to attacks of megrim, epilepsy, and angina pectoris, and this effect has been too rapidly obtained to be due to lack of nutrition—it must be nervous—while a very little food taken at the time may have an effect far beyond its nutritive value. But strangely enough, while fasting will cause these attacks and taking food will prevent them at times, actual vomiting will relieve them rapidly. A patient remarked once to her physician: "Twenty grains of ipecac never failed to cure me of an attack of asthma within fifteen minutes. The spasm gave way with the first feeling of nausea."

One would certainly expect that of all the acts of life the exercise of the reproductive functions would properly be considered healthy, yet from the time of Hippocrates, who called the act of copulation a "short epilepsy," to Esquirol, who enlarges upon the theme and finds the two almost analogous, its true nature has been suspected. It begins to seem to me very desirable that some one should put the point of a knife between normal and morbid processes so that sanity and insanity may be distinguished, and the conclusion may not be logically reached that the only healthy man is like the only good Indian—a dead one.

A few words, in closing, about hemianopia, which I have for a moment neglected to ramble through cognate fields. Right hemianopia is much more troublesome than left, because we read from left to right. The prognosis in any case of functional hemianopia is, of course, good, but its recurrence is probable under the conditions that primarily induced it. Like all neurosal conditions, it usually makes its initial appearance at one of the epochs of life, viz., that of puberty or the uncertain and anxious period which marks the entrance upon the active duties and responsibilities of life.

From the ophthalmoscope nothing is to be learned. Professor Förster and Dr. Wadsworth alike report no retinal ischemia. On the contrary, one of my patients had just taken a dose of cannabis indica, which drug produces well-marked retinal congestion.

I am confident that this condition is by no means a rare one, and I do not doubt that many of our patients who suffer from hemicrania could, if sufficiently observant, tell us amply corroborative tales of its neurosal nature.

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EDITORIAL ARTICLES.

MUSICAL APHASIAS.

A distinguished French neurologist is giving attention to disorders of the musical function. All language he contends is a system of symbols used by living beings for making known to each other their psychical states. Music is therefore in truth a language with its motor elements of expression and its sensory elements of perception. Primitively reflex, secondarily intentional, musical language gives expression to emotional states, or to descriptive images. In origin anterior to articulate speech, and allied originally to spontaneous intonation or imitation reflex of nature's sounds, it must be studied in three modes, the perceptive, expressive, and psychic.

The perceptive and expressional modalities need no elucidation, as they simply correspond to audition and musical execution; they are the sensorial and motor phases of the problem. The psychic musical language comprises the processes of interior musical language intermediate between motor and sensory operations; in other words, it corresponds to musical ideation.

With certain subjects internal musical language affords symbolic resources superior to those of all other language, and music represents for these for the expression of their thought and sentiments a medium they would choose. In this way one can study the musical expression of the principal emotions—joy, grief, love, hate, terror, etc.

The study of musical aphasias and amusias applies, therefore, wherefore a subject is suspected of speech disorder. Music-aphasia or amusia must correspond to the ascertained disorders of speech. The study of these disorders must be equally as

important as the speech disorders in association with mental troubles. It is easy to imagine the study might become very interesting and lead into realms that the inquisitive spirit has not yet penetrated.

EDITORIAL NOTES.

Food Adulteration in Germany.

The subject of food adulteration has been given a great deal of publicity during the past year in this country. So thoroughly has the public been aroused by the abuses that have been shown to exist in the manufacture of various food products that Congress, bending to the popular clamor for pure food, finally enacted a drastic pure-food law. But the people of this country have not been the only sufferers from unscrupulous manufacturers. This is shown by a consular report recently received by the Bureau of Manufactures. It appears that in Germany food adulteration has been carried to an extreme degree. It is stated in this report that trained chemists are regularly employed by large and supposedly reputable firms for the purpose of performing the sophistications scientifically. The report states that there were in Germany, in 1888, 1400 prosecutions for adulterating food products; in 1898 the number had increased to 3000; in 1901 to 3556; and in 1903 to 6000. Butter, sausage, wines, chocolate, cocoa, brandy, and medicines have been found to contain absolutely dangerous substances used for adulteration. In the future the sign "Made in Germany" will no longer stand for products that heretofore have been considered first-class and above suspicion.

Fear of Leprosy.

During the past few weeks the newspapers have on various occasions published accounts of the finding of a young Syrian in a Maryland town who was afflicted with leprosy. He was on his way to Syria when discovered by the health authorities, who immediately imprisoned him in a freight car. The car was sent to various points east and west, but at each stopping place the health authorities refused the poor wretch any shelter. He was finally dropped off somewhere in the mountains of West Virginia, where from last reports he was living in a tent, subsisting as best he could under the circumstances. It is hard to believe

that trained medical men who composed the health boards with which this poor sufferer came in contact could be guilty of such inhuman conduct. While the laity may be horror-stricken at the thought of a leper in their midst, surely such fears are not held by the medical profession, who know that the disease under sanitary conditions is rarely contagious. It seems to us that some means might have been devised whereby the poor fellow could have been conveyed to a place where lepers are segregated, and there given the necessities of life.

Telephone Advice.

The use of the telephone by patients who wish to secure medical advice for which they do not expect to pay is the source of considerable annoyance to most practitioners. In order to put an end to all doubts as to the lawfulness of charging for telephone consultations a Viennese physician recently brought a case into court, in which a patient who had on several occasions, even in the night-time, asked for professional advice and had refused to pay a fee for the service. The judge decided that advice must be paid for whether given in the consulting-room, by letter or telephone, or at the bedside. It is the duty of a practitioner to decide whether the case is such that he may safely give instructions by telephone after he has seen the patient on a previous occasion. If physicians would render bills for telephone consultations at the same rate they charge for office consultations they would soon cease to be annoyed in this manner.

Dirty Bedding.

The danger to the public of dirty bank-notes and sweat-shop clothes is well known, but lately an English sanitary officer has discovered another menace to the public health in the form of cheap bedding. An investigation into the mode of manufacture of the cheap flock bedding sold in the poorer quarters of London shows that abundant opportunities for the spread of disease are furnished from this source. According to the official who first looked into the methods of manufacture of this bedding it is made from filthy rags collected from dust heaps. These rags are shredded by machinery without any preliminary cleansing and made into mattresses. One gramme of this flock yielded 7,600,000 colonies of bacteria, while only 6,500,000 were obtained

from a like amount of sewage. The poor have enough to contend with without being further endangered by such dirty bedding.

Belladonna Poisoning Due to Belladonna Plasters.

A hitherto neglected source of poisoning was recently reported by a writer in the *American Journal of the Medical Sciences*, who related three cases under the above heading in which very serious symptoms followed the use of common belladonna plasters. These plasters are usually bought and applied by people without seeking the advice of physicians. As hardly any consideration is given in text-books on this subject it would be well for the physician to bear in mind the possible danger when prescribing belladonna plasters. It would also seem advisable, owing to the popular use of these plasters, for the manufacturers to print a word of caution on each one, so that purchasers might be aware of the consequences of wearing them for too long a time.

Municipal Ice Plants.

This summer has seen another trust added to the already too long list of such evils. In numerous cities the ice dealers have combined, and not only have they made the price of ice prohibitive for the poor, but they have actually blacklisted the small grocery keeper who sells an occasional piece of ice to one of his customers. Ice in summer, especially in cities, has come to be a necessity. In households where sickness exists it is at this season almost as essential as medicine. Locally conditions have become so bad that the city authorities are seriously considering the advisability of erecting a municipal ice plant and selling the product at such a price as will merely cover the cost of manufacturing and delivering. The plan is one that ought to be adopted generally. If municipalities can furnish people with water at a tax that is merely nominal, they can as easily furnish the water frozen, and that at a time when it is sorely needed to preserve the health of the community.

ITEMS AND NOTES.

Dr. Nicholas Senn returned on August 3d from a trip to northern and eastern Africa.

In the University of Berlin a course of lectures on criminal anthropology has been recently inaugurated.

The contractors for the new $200,000 Physics building for the University of Toronto commenced work last month.

Dr. Harry T. Marshall, Baltimore, has been appointed pathologist of the United States Bureau of Science, Manila.

The German Practitioners' Association held its annual meeting this year at Halle, Professor Loebker, of Bochum, being in the chair.

Oklahoma and Indian Territory have shown the largest percentage increase in the number of physicians during the past five years.

The first Japanese woman who studied medicine in Germany is Miss Lada Urata, and she has been made professor, *honoris causa,* by her own government.

Dr. Andrew MacPhail, editor of the *Montreal Medical Journal,* is the author of a book highly spoken of, and which has just appeared—"The Vine of Simbah."

The Antituberculosis Association of British Columbia is making a personal appeal to all residents of British Columbia for subscriptions toward a consumption sanatorium.

Dr. Frank Billings, of Chicago, is reported in the papers to have presented to the Marshall Field estate a bill of $25,000 for one week's attendance during the late millionaire's fatal illness.

After 1910 the Illinois State Board of Health will not recognize medical colleges that fail to require at least nine months of work in chemistry, biology, and botany in a high-school course, in the entrance conditions.

Out of the thirty-seven slaughter-houses condemned by the board of health in Philadelphia, twenty have closed permanently, sixteen have been put in sanitary condition, and the owner of one, refusing to obey, was prosecuted.

The medical faculty of the Paris University has planned an international technological encyclopedia, to be issued in ten languages, including "Esperanto," the new world language, which is supposed to have supplanted Volapük.

In the will of Edward Crane, of New York, who died recently, there is bequeathed to the Army Medical and Surgical Library at Washington a copy of the very rare work, "Clowes on Gunshot Wounds," which was published in 1596.

Three cases of typhus fever are said to have developed in Winnipeg. The statement is made in the public press that there has been no typhus in Canada for fifty years. Five thousand are said to have died of it in Montreal at that time.

A firm of dentists at Los Angeles, California, has unsuccessfully appealed against a verdict awarding damages of $2400 to one of its patients. During the extraction of seven teeth, one slipped from the forceps and passed into the bronchus.

The death is reported from Laporte, Ind., of the oldest woman in the State, and possibly in the country, who died on July 30 at the age of one hundred and twelve years. She was born in Volgravitz, Poland, and came to this country in 1870.

The *Paris Medical Journal* has been started under the joint editorship of Drs. A. A. Marden and E. L. Gross. The purpose of this excellent journal is to provide English-speaking physicians with a monthly résumé of the work of French physicians and surgeons.

Cholera in the Philippines, although more virulent in its outbreak than the epidemic of 1902, according to late advices has been got under partial control. The sale of foodstuffs liable to infection has been interdicted, and it is hoped to confine the disease to the native quarters.

The Fifth International Congress of Obstetrics and Gynecology, which was to have been held in St. Petersburg last year, but was postponed until this year, has now been again postponed for another year. It will be held in St. Petersburg from September 11 to 18, 1907.

Dr. Eugene F. Cordell, professor of the history of medicine and librarian of the School of Medicine of the University of Maryland, announces the gift to the library of the Miltenberger collection of 949 volumes, bringing the total number of volumes in the library to 6280. The library was founded in 1813.

Reports from Louisiana health inspectors resident in Cuba say that eight cases of yellow fever were reported during June. The Havana resident inspector also said that in a case of yellow fever in Havana the patient had been ill for five days at Tacon market before the health authorities found out his condition. About 1000 persons are employed at this market, many of them sleeping there at night.

The *Boston Medical and Surgical Journal* says that, as an outgrowth of the Society for Psychical Research, a new organization, to be known as the American Institute for Scientific Research, has been granted a perpetual charter by the State of New York. The objects of the institute are to organize investigations in abnormal psychology and to extend knowledge of the subject along scientific lines.

Milk licenses can be revoked on sufficient grounds by the health department of New York City, so the Appellate Division of the Supreme Court has decided. A certain milk company tested this question by suing the city to recover $30,000 damages for destroying its business by revoking its licenses. The board contended that the company's dairies were found to be in a filthy condition, and its milk adulterated and unwholesome. The court unanimously sustained its action.

The Superior Court of California has granted an application for divorce on the ground of pulmonary tuberculosis. A wife applied for divorce, and in her application alleged that before the marriage was contracted she asked her prospective husband if he was perfectly sound and healthy, and received every assurance that he was free from disease. Subsequently, after the marriage was consummated, it was proven that he was suffering from tuberculosis, and the court held that the existence of this disease was sufficient to warrant the annulment of the marriage.

The *Deutsche medicinische Wochenschrift* states that the Copenhagen and the Berlin academies of science have united in publishing a catalogue of all the Greek and Latin medical writings that have been handed down to us from antiquity. This

catalogue is to be preliminary to the suggestion that the International Association of Academies of Sciences undertake the task of publishing a complete scientific edition of the collected works of the physicians of antiquity. The plan is to be proposed at the next general meeting of the delegates of the association, which will be held at Vienna during the spring of 1907.

The New York Botanical Garden has recently received from E. Merck & Co., of Darmstadt and New York, a collection of plant constituents which consists of alkaloids, glucosides, amaroids, sugars, starches, plant acids, coloring principles, fats, waxes, and some rare aromatic principles. The number of exhibits is between 400 and 500, comprising not only the most powerful poisons, the most active medicinal principles, and other things for which uses are not known, but many things extracted from plants only experimentally, for scientific purposes, for which it is hoped uses may be developed in the future.

The medical corps of the hospitals of Paris has suffered the loss of one of its most esteemed members, Dr. Albert Josias, who has died at the early age of fifty-three years. He was a member of the Académie de Médecine, an officer of the Légion d'Honneur, physician to the Hôpital Bretonneau, sanitary inspector of the city of Paris, and member of the Superior Board of Health of the Department of the Seine. He was the author of numerous works, relating principally to matters of sanitation and forensic medicine. He also had published important discussions of tuberculosis in children and the treatment of diphtheria. In 1896 he published a book on the therapeutics of childhood, and he was a collaborator on the "Traité de Thérapeutique," edited by Albert Robin.

The revised figures of the Bureau of Immigration show, says a contemporary, that during the fiscal year ending June 30 the number of immigrants admitted to this country was 1,100,073, as against 1,026,499 for the previous twelve months, a gain of 73,574. It is stated that most of the newcomers were from Austria-Hungary, Russia, and Italy, and that they were somewhat inferior in type to those of previous years. During the year 12,433 applicants for admission to the ports of the United States were debarred for various causes, principally disease of some sort. Seventeen aliens were arrested and deported, on the ground that they had been brought to America for immoral purposes. There were thirteen criminal proceedings for the importation of these people, and ten of the defendants were convicted.

The section of medicine and hygiene at the recent Colonial Congress at Paris in June passed resolutions, says the *Journal of the American Medical Association,* advocating the abolition of opium-smoking dens throughout the French colonies, also advocating the creation of a central institute for parasitology, human and animal, in all the colonies, with a sanitary police to take charge of epidemics and epizoötics, and that the committees in charge of the erection of prisons should always have a representative of the medical profession among their members. Another resolution called for the appointment of a special commission to study beriberi. Brault reported nineteen cases of epithelioma in Arabs, and Jeanselme and Nicolle presented exhaustive studies of the pathology and medical organization of Siam and Tunis.

The Pennsylvania Society to Protect Children from Cruelty has arranged, says an exchange, to have every child with whom it deals, from families where drunkenness, immorality, and cruelty are rife, carefully examined physically and mentally to determine not only the presence of any immediate disease, but whether there are any lurking symptoms of disease or any mental retardation which would still further the child's chances of becoming a diseased and suffering citizen. The Philadelphia Board of Health has given the services of two of its medical inspectors, Dr. Alexander C. Butcher and Dr. Lewis C. Wessels, who visit the homes five days a week and examine the eyes, ears, nose, and throat of from ten to eighteen children, and Dr. Alfred Gordon follows with careful mental examination. A card catalogue of pathologic conditions is kept, and the consent of the parents is secured, whenever possible, for operations which may be deemed necessary by the examining physician.

The annual meeting of the Imperial Cancer Research Fund was held in London, July 25. The report of the Executive Committee, says the *Journal of the American Medical Association,* gave a sketch of the work done during the past year. Various "cancer cures" were examined, the report states, but investigation failed to show that they had any value. Dr. Ernest Bashford, the general superintendent, in his report stated that the results of the investigations made during the past three years of the fund's existence in spontaneous development of cancer in human beings had led to an alteration in the details of the work. He pointed out that the facilities for ascertaining the occurrence of this disease in native races and within different geographical areas are unique. He also gave some interesting statistics con-

cerning cancer in native races. In referring to the experimental work, Dr. Bashford stated that the results "only indicate the possibility of rendering normal mice unsuitable for the growth of experimental cancer. They have not enabled us to attest the progress of experimental tumors, far less to effect the cure of the disease occurring naturally."

The *Army and Navy Journal* of July 28, 1906, says: "Col. William C. Gorgas, Medical Department, United States Army, Chief Sanitary Officer of the Panama Canal Zone, in an official report on the recent outbreak of smallpox in the city of Colon, states that the first case of the disease appeared there on June 9, when the victim, a negro child nine years old, who had recently arrived from Carthagena, Colombia, was taken slightly ill and had an eruption, which was not serious enough to prevent the child from playing constantly. Although inspectors noticed the condition of the child's skin, the case was so mild that smallpox was not suspected until several weeks later, when other cases appeared in the same locality. About thirty-five cases have been quarantined in tents, and the houses in which they lived, all of which are in the same part of Colon, have been thoroughly fumigated. So far there have been no deaths, and Colonel Gorgas says there seems to be no danger of an epidemic of smallpox." In the same issue of the *Journal* Colonel Gorgas reports as a result of his observations the interesting conclusion that the rigorous sanitary measures instituted by the American authorities in the canal territory render the Jamaica negroes employed there peculiarly susceptible to pneumonia and other affections of the lungs and throat. It is explained that the West Indian negroes, not being accustomed to an abundance of fresh air, clean quarters, and a proper diet, become extremely sensitive to changes of the temperature when subjected to strict health regulations, and that consequently the Jamaica negroes are not likely to prove as efficient in canal construction as it was originally believed they would be. Governor Magoon, of the Canal Zone, Chief Engineer Stevens, and Mr. Shontz, chairman of the Canal Commission, all agree that the West Indian negroes cannot be induced to eat sufficient wholesome food to keep them in sound health, and they add that lack of lung capacity and insufficient nourishment, rather than laziness, are responsible for the inability of the West Indians to do an amount of work equal to that done by white laborers from Spain.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Anastomosis of the Vas Deferens.

G. F. Lydston (*Journal of the American Medical Association*, July 21, 1906) reviews the objections to and the indications for vasectomy, and points out that it is a perfectly safe operation when properly performed, and that while it has a profound influence on the innervation and circulatory supply of the prostate and seminal vesicles, it does not necessarily cause permanent sterility. It has a certain range of application in sexual neurasthenics, spermatophobiacs, and in genuine spermatorrhea. In intractable prostatitis and seminal vesiculitis it is of the greatest value and deserves a trial before the major operations. Recurrent epididymitis also furnishes an important field for this operation, and it has a certain range of application in suspected or known tuberculosis or malignant disease of the testes. In some cases of enlarged prostate with hemorrhages from the vesical neck, unsuitable for the radical operation, he has succeeded in so improving the conditions by a preliminary vasectomy that a prostatectomy could be performed. In enlarged prostate when prostatectomy is disallowed or is inadvisable, vasectomy is indicated.

The technique of the operation is described. In a certain, as yet undetermined, number of cases it is possible to reëstablish the continuity of the vas deferens after a previous vasectomy has been performed. The chief indication for this is in cases of accidental severance of the vas, but in case of double resection, followed at a longer or shorter period by anastomosis, there are two chances of restoring fertility. One or the other vas is liable to regain potency. The time that should elapse between the vasectomy and the anastomosis varies, of course, according to the improvement in the condition for which the vasectomy was performed. Lydston describes his method of anastomosis, which consists in excising the nodule at the point of resection, bringing the two ends together and uniting them after having inserted into their lumen a strand of large-sized silkworm-gut, the proximal end of which is passed out by the threaded needle about an inch and a quarter above the anastomosis, and out through a puncture in the skin a little above the upper angle of the wound.

The object of this silkworm-gut thread is to preserve the continuity of the lumen, and it should be removed at the end of a week. A portion of the free edge of the fascia, which was divided to expose the parts, is wrapped closely around the vas so as to close it in completely. The fascia is closed with fine catgut, and the edges of the scrotal wound brought together with fine silkworm-gut or horse-hair. There is very little reaction after the operation, though a certain amount of exudation and nodulation may be perceptible for several weeks. Out of four cases thus operated on one patient has shown, microscopically, a restoration of function by the presence of spermatozoids in the urine, one is apparently a failure, and there has been no opportunity as yet to determine the condition in the other two. The operation is illustrated.

Cancer After Hysterectomy.

Andrew F. Currier (*New York Medical Journal*, July 28, 1906) after consideration of this subject offers the following suggestions: (1) The necessity of more careful clinical and pathological records, both public and private, in all the cases in which supravaginal hysterectomy is performed. This would probably result in the discovery of cancer of the cervix or corpus in cases in which it is not suspected, and would probably bring to light additional facts in regard to the history of the evolution of cancer. (2) The periodical examination of those who have undergone the operation in question at not longer than six months intervals. This is especially desirable for those whose tissues are in a bad condition of nutrition or who suffer from hereditary taint. (3) Complete removal of the uterus offers greater security from cancer than does retention of the cervix. If the patient's history reveals any conditions which suggest the possibility near or remote of future degeneration of tissues, complete extirpation should be the invariable rule.

A New Method of Incision for Removal of the Breast.

Carl Beck (*Medical Record*, July 14, 1906) describes his method as follows: The incision line around the breast is in the form of a rectangle. The interior line of this rectangle is continued on both ends to the extent of about three inches. The same is done with the lower end of the external side, while the upper exterior end is extended along the outer margin of the pectoralis major muscle up to its humeral insertion. The axilla

itself is not touched, in order to avoid cicatrization in the axilla, which is apt to produce edema of the arm. After the rectangle is excised the upper skin flap is formed and reflected. This fully exposes the area of the operation. Whether the operation be radical or not the principle of access remains the same.

Cancer of the Rectum.

At the recent meeting of the American Protologic Society a paper under this title was read by W. M. Beach. In all the writer has had twenty cases, and from his experiences draws the following conclusions: (1) A radical operation for cancer of the rectum is indicated (*a*) where the disease is not far advanced; (*b*) where the cancer is located in the anal region and does not involve neighboring structures. (2) Cancer of the movable rectum should be classed as operable as far as results are concerned. (3) In cancer high up, colostomy offers the best results. (4) Complications by metastasis and mechanical obstruction indicate colostomy.

Sweat-gland Carcinoma.

B. Ruge (*British Gynecological Journal,* February, 1906) says in view of the obscurity which still overhangs the question of new growths of the sweat glands, in spite of the researches of Toerock, Peterson, Pick, and others, he has minutely examined the histology of a tumor which was a typical adenoma of the sweat glands, and gives a detailed and beautifully illustrated description of the structure of this growth, which is undoubtedly malignant. The genesis of this tumor from a sweat gland is supported by its connection with the surface by an unmistakable duct, its investment being cylindrical epithelium, and being composed of two layers, a characteristic of sweat-gland adenoma, according to Pick.

Traumatic Edema.

Kohler (*Münchener med. Wochenschrift,* June 12, 1906) cites the case of a man who struck the second finger against the edge of the table. No external wound, dislocation, or fracture was produced. After some hours the forearm became swollen, and the wrist, hand, and arm became congested, cyanotic, and cold: the muscles were tender to pressure, but the radial and brachial pulse were present. The skin on the arm was anesthetic, and the edema persisted under treatment for some months.

Hemorrhoids as Cause of Occult Hemorrhage.

Goldmann (*Centralblatt für Chirurgie*) calls attention to the fact that hemorrhages of uncertain origin may arise from piles located high in the rectum. In one case he noticed a pile 18 centimeters above the sphincter. The hemorrhages caused by these lesions are small, but by their persistence cause severe anemias. The blood is so intimately mixed with the feces that its detection is only possible by very careful examination. Rectoscopic examination is necessary to locate the lesion. The treatment is operative.

MEDICINE.

Practical Significance of a Trace of Albumin in the Urine.

J. P. Tunis (*American Journal of the Medical Sciences,* July, 1906) summarizes his article as follows: From any point of view the term physiologic albuminuria is almost universally regarded as misleading, unsatisfactory, and inadequate. So long as albumin is a constituent of the urine the individual voiding it cannot be regarded as normal. The mortality among such persons must necessarily be higher than among an equal number of individuals who do not show this phenomenon. The actual mortality-rate among this class can best be approximated by a comparison of the records of half a dozen of the largest life insurance companies (dealing with hundreds of thousands of cases) over a period of twenty years at the least. The prompt means of discriminating between the transient forms of albuminuria and those of real clinical significance may be found in some such therapeutic test as that of calcium lactate rather than by any further developments in the chemistry of the urine. Experience proves that a faint trace of albumin in the urine of an individual past middle life is often of greater significance than a decided trace by unexpectedly directing attention to the finding of casts of pathologic importance, which might otherwise have been easily overlooked. For practical purposes the heat and nitric acid test for albumin is the best one, and the careful use of Roberts's solution is the most satisfactory control test in doubtful cases. For the proper diagnosis and prognosis too much stress cannot be laid on a thorough consideration of the clinical conditions as a whole.

The Influence of Sugar on Work.

C. Fere (*British Medical Journal*, March 31, 1906) brings forward experimental evidence to show that there is no paradox in the statement that sugar may be a condiment rather than a food. Most observers (but not all) who have examined the effect of the ingestion of sugar on the power of doing work have come to the conclusion that sugar directly increases this power. Fere, quoting elaborate experiments done on himself with a Mosso ergograph, points out that the sensory effect of the sugar's sweetness has been overlooked; he finds that sugar diminishes the power of working, excepting for the short initial period during which the sensory stimulus of its sweetness lasts, and, like any other sensory stimulus, increases the power of doing work. Hence sugar, like kola, coca, or alcohol, diminishes the amount of work that can be done in an hour or in a day, but increases the force of a single shorter effort. Sugar is a stimulant, and, like anything else that excites, accelerates the onset of fatigue.

Some Obscure Cases of Urinary Disorder.

R. C. Elsworth (*Practitioner*, June, 1906) says that cystitis of long duration, due to a primary lesion of the bladder, and accompanied by acid urine, is a very common disorder. Urinary disorder with acid pyuria and frequency of micturition does not mean that the bladder is excluded and that the lesion is necessarily in the kidney. There may be extensive disease of the kidney, without urinary symptoms and with normal urine. There may be pain, frequent micturition, and acid pyuria, without disease of either kidney or bladder, the symptoms being due to a lesion in the ureter. The various urinary organs being so intimately connected, the symptoms produced by disease of one may be common to all. Differentiation is possible only by physical examination, in which the cystoscope gives valuable aid. In some cases the administration of a pigment such as an aniline dye facilitates the recognition of a more or less obstructed ureter.

Tuberculosis of the Mucous Membranes.

Hollander (*Berliner klin. Wochenschrift*, 1906) calls attention to the frequency of tuberculosis of the mucous membranes of the nose and mouth associated both with and without lupus. In opposition to the descending form of this disease, in which

the clinical condition is controlled by the condition of the diseased lung, the prognosis for life in the ascending form is fair. A tendency to recovery is shown after removal of the primary focus, and even the lung lesions tend to heal. The treatment advocated is cauterization with hot air and the internal use of iodine and calomel.

Serous Spinal Meningitis.

Krause (*Berliner klin. Wochenschrift,* 1906) reports a case in which a man was shot in the neck and ear. The bullet was removed, and the patient improved for some time. Nervous symptoms suggesting irritation in the cervical region appeared, and six months after the first operation the fourth, fifth, and sixth cervical vertebræ were exposed, and necrosis of these bones was found. The posterior portions of these bones were removed; the adjacent dura was filled with fluid and edematous. The patient recovered.

THERAPEUTICS.

Electricity in Constipation and Enterocolitis.

L. Lebon (*British Medical Journal,* July 14, 1906) has found that by employing galvanic currents of high intensity he has been able to cure patients suffering from chronic constipation and enterocolitis. His methods are as follows: One electrode is applied to the lumbar region and the other on the surface of the abdomen; or two small plates, well padded with cotton-wool, are placed on the surface of the abdomen, one over each iliac fossa. If the first method be employed, neither reversals nor interruptions of the current are to be made; if the second, reversals of the current should be made rapidly, to avoid burning of the skin, which might result from polar action. In all his cases the immediate results of the electrical treatment have been good. In cases of chronic constipation, spontaneous evacuation of the bowels may occur after only one séance. More frequently six or seven séances are necessary before this effect is produced; and the longer the constipation has existed the more prolonged must the electrical treatment be before cure results. Simultaneously with this improvement in the expulsive power of the bowels the motions become softer and of a normal consistency, and patients who have suffered from chronic constipation for a number of years may, when treated in this way, be enabled to have a motion

regularly every day, if assisted by some gentle laxative. Failure of this treatment is to be found chiefly in patients who have been addicted to taking strong purgatives, or who have been in the habit of having large rectal enemata administered.

In mucomembranous enterocolitis the results of electrical treatment are no less remarkable, and in these cases treatment should be continued until all mucus has disappeared from the stools. The author finds that the majority of cases require about two months' treatment, and that the cure which results is lasting; if recurrence of the trouble takes place a short repetition of the treatment is sufficient for a cure.

During the course of electrical treatment the author stops all medical treatment. The patients are instructed to solicit an action of the bowels every day, and best on waking in the morning. If no action occurs he advises the introduction into the rectum of a glycerin suppository, and that the patient lie down again for a short time, and again attempt to empty his bowels. If this does not suffice, he advises the patient the next day to take a dose of his usual purgative medicine, or preferably employ a small rectal oil injection. The author finds this electrical treatment most effective when the patient is strictly dieted. In those patients in whom the intestinal trouble appears dependent upon dyspeptic disturbances a mixed diet has a good effect; not only does the intestinal trouble improve, but the fulness after food and the eructations lessen and the appetite improves. In some cases of enterocolitis in which diarrhea alternates with constipation, the author finds that the electrical treatment soon causes the diarrhea to cease; he also finds that the same treatment strengthens and renders firm the abdominal muscles in cases in which these are found soft and lax. To improve the neurasthenic condition from which patients suffering from chronic constipation or enterocolitis are often affected, static baths are advised by the author. He concludes that in cases such as these, if no improvement occurs in two or three months with ordinary medical treatment, electrical treatment should be resorted to.

The Treatment of Tetanus.

In a recent lecture before the Vienna Medical Society, D. Lotheissen (*Lancet,* Feb. 14, 1906) explained the method of treatment of tetanus and the prophylactic measures worked out by him recently. He employs the serum prepared at Hoechst, in Germany, which is twice or three times as strong as the French preparation, and he injects at least 100 antitoxin units. As re-

gards the nature of the wounds which give rise to suspicion, Dr. Lotheissen puts first in order the so-called "street wounds," mostly resulting from collision with cars or other vehicles, falls from horses, or motor-car accidents. These wounds have been in contact with street dirt or mud; they are extensive, and the tissues are bruised.

Another item of importance is the depth of the wounds, because an injury inflicted by a long object, such as a piece of wood, may become infected, and in a deep wound exclusion of air is possible, with consequent favorable conditions for the anaerobic microörganism. The quantity and virulence of the dangerous material which has been introduced are unknown, so that large doses of the serum are required even in prophylactic injections. As the serum is slowly but continuously excreted by the organism, a repetition of the injection is desirable. Dr. Lotheissen generally gives a second dose after one week if suppuration and fever continue. Acting on this plan he has during the last year seen only twelve cases of tetanus, all of which had also received prophylactic injections, whereas in former years the cases numbered 47, 71, 35, and 58. The onset of the tetanus in the last-named twelve cases was no doubt due either to the injections having been given too late or to the serum being too weak. At any rate, the attacks were decidedly milder than in former years, consisting merely of some spasmodic attacks of the masseter muscles and of the intercostal and abdominal muscles. In one case a scarlatiniform rash was visible for three days, but no albuminuria or swelling of the joints was noted. One case ended fatally; the patient was a man whose left arm had been smashed by the discharge of a gun, and he was not taken to the hospital until a fortnight after the accident, when the virus had no doubt already taken a firm hold on the nervous tissues.

Radium in Surgery.

R. Abbe (*Journal of the American Medical Association*, June 21, 1906) has employed very powerful radium applications in 127 cases, covering a large number of conditions. The greatest interest is in the morbid growths, such as lupus, epithelioma, sarcoma, etc., and he remarks here that in every case in which he has laid a radium tube on a wart the growth has rapidly disappeared by retrograde degeneration of the cells composing it. In thirty-five cases of lupus and epithelioma all have shown improvement, and twenty have recovered, at least for the time. In the graver cases of cancer the results are less favorable. Of

eleven operable cases tested six patients were subsequently operated on. In the other five the operation was deferred on account of improvement. He thinks that possibly with the use of radium in some other way than with the thin glass tubes employed better results may be obtained. In one type of grave cancer, mammary scirrhus, the agent seemed to promise good results. In three cases, in which the breast was subsequently amputated, microscopic examinations showed characteristic retrograde changes, which may explain the improvement in four others similarly treated. In sarcoma the results were rather brilliant, and several cases are detailed. In two cases of spindle-cell sarcoma there was only seeming arrest, but no retrograde changes so far as observed. In overdosage, or with too long exposures, radium rays are destructive rather than alterative, and he has seen toxic conditions aroused by overzealous methods. Experience in goitre encourages further experiment, but not positive claims as to specific benefits. In pigmented moles removal by dry necrosis can be produced, with results possibly better than by the other methods.

The author sums up his conclusions as follows: (1) Radium action resembles that of Roentgen rays. (2) It differs specifically, and will cure some cases promptly which resist the latter. (3) It is applicable to the anterior cavities of nose and mouth, which are inaccessible to the Roentgen ray. (4) It is curative in most superficial epithelial cancers and lupus. (5) It has failed of curative action as yet in forty test cases of grave internal cancers. (6) It promises interesting results in other surgical conditions under study.

Ingestion of Sea Water in Tuberculosis.

F. Charles (*British Medical Journal*, July 14, 1906) has treated several cases of pulmonary tuberculosis by administering by the mouth small quantities of sea water, with a view of seeing if as good results cannot be obtained by this method as by the method of subcutaneous injection of sea water carried out on phthisical patients by Quinton. In two out of four cases treated by ingestion of sea water a well-marked remission of the disease has been obtained. The author finds the best results are obtained with patients in the first and second stages of the disease; of ten cases, in eight the appetite and general strength improved, the expectoration diminished or ceased, and at the end of a few weeks a very marked amelioration of the lung signs occurred in four cases.

These favorable results obtained by the administration of

sea water are considered due to a rousing of the flagging digestive powers, and a comparison of the results obtained in patients treated by this method and in those in whom this treatment was not carried out (although the other customary treatment for phthisis was employed in both classes) has convinced the author of the benefit to be obtained by this method of treatment. This method possesses advantages over the subcutaneous injection plan in that sudden rises of temperature, headaches, backache, etc., sometimes produced by the latter method, are generally either entirely wanting or very slightly marked.

The author has further found the ingestion of sea water of use in cases of dyspepsia associated with a diminution of the quantity of hydrochloric acid in the gastric juice; in such cases he finds a rapid increase of the appetite and a marked improvement of the general health. For administration the sea water must be freshly obtained and filtered; sterilization by heat impairs its therapeutic powers; it must be taken on an empty stomach, at first in spoonful doses, half an hour before the two principal meals of the day; in a few days' time the dose may reach half a tumbler. The treatment should be discontinued after every eight or ten days, and then resumed a few days later.

Therapeutics Based on Pathological Physiology.

R. C. Cabot (*Boston Medical and Surgical Journal,* July 19, 1906) concludes as follows: (1) Treatment based on pathological physiology is not the best type of therapeutics yet worked out; neither is it the worst. It occupies a position intermediate in value and efficiency between etiological treatment (or that which removes the cause of disease) and symptomatic treatment, which simply smothers a symptom. (2) It is based on theories of the nature and trend of the body's reaction against the materies morbi, theories which like all valuable hypotheses must be constantly and empirically verified. (3) Empiricism is not a type of treatment, but an essential element in all treatment. Nevertheless (4) theory is invaluable because it furnishes the motive power of most scientific progress. (5) Treatment that aims to remove the cause of disease should neglect very largely the individual factors in the case, but treatment based on pathological physiology can be effective only by ascertaining and respecting the physical and psychical peculiarities of each individual and the unique relations in which he stands to his family, his work, his education, his place of residence, and many other aspects of his environment. (6) Etiological or symptomatic treatment

must first ascertain at what spot in the organism the trouble resides. To that spot it then directs its energies. But treatment based on the individual's manner of reacting to the disease must study the whole individual so far as it can discover him.

The Treatment of Stammering.

Elmer L. Kenyon (*Medical Record,* June 16, 1906) advances three main ideas in his discussion of the treatment of stammering: First, education, that the patient may consciously learn how to handle his speech apparatus; secondly, discipline, that he may overcome a firmly rooted and stubborn habit; and thirdly, correction of general organic disability, and of peripheral abnormalities, in order that the delicate mechanism of speech may not be physically interfered with. The patient must at once be made a student of normal speech from the standpoint of the technique of its production. This new knowledge must be immediately put into practice. Speech is now no longer automatic, but becomes a function governed in detail by the consciousness and the will. The patient will gain control of his speech mechanism and direct it in detail. But even then the subconscious nervous structures must be held well in hand until they can be trusted to assume control. This defect should be corrected at an early stage, and firmness of purpose on the part of the patient is one of the important elements in its successful treatment.

Diet in Tuberculosis.

Herbert M. King (*Medical Record,* July 21, 1906) declares that disturbed metabolism is essential to the development of tuberculosis. If, in all respects, the cell is normally nourished it will be sufficiently resistant to the invasion of the tubercle bacillus. As a rule, one is able to trace errors in nutrition antedating by months and often by years the probable period of infection in a given case. The diet question in the case of tuberculous invalids is more than one of theoretical standard amounts and relations of proteids, fats, and carbohydrates. The tastes, habits, and peculiarities of the patients, and their heredity, are important factors. Variety, preparation, and the manner of serving foods are all-important. Psychotherapy is more important in diet prescriptions perhaps than anywhere else. In the study of these cases the food requirements should be determined and met, if possible, and the dangerous error of overfeeding should be avoided.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Intracranial Lesions as Sequelae of Chronic Purulent Otitis Media.

M. Allen Starr (*Medical Record,* March 10, 1906) says that the ordinary cerebral complications of otitis media are abscess of the brain, meningitis, sinus thrombosis, and acute encephalitis. The symptoms of acute encephalitis are very similar to those described as occurring in abscess. After discussing the ordinary symptoms which appear when chronic otitis media is complicated by brain abscess, the writer speaks of two recent methods of investigation: the examination of the cerebrospinal fluid obtained by lumbar puncture, and examination of the blood. In meningitis the number of leucocytes in the cerebrospinal fluid is enormously increased. The writer has failed to find any record of an increase in leucocytes in the cerebrospinal fluid of patients suffering from abscess except in those cases in which a complicating meningitis was present. In abscess, microörganisms, which it is almost uniformly stated have been found in the fluid taken from patients suffering from meningitis, have not been found. In acute otitis media the leucocytes in the blood are likely to be moderately increased. A very great and sudden increase in their number, however, is a very valuable indication of a new inflammatory complication.

The writer believes that a more rapid rise in the number of leucocytes and a higher leucocyte count is found in meningitis than in brain abscess. A rapid rise in the ratio of the polymorphonuclear leucocytes to other elements in the blood has been observed in all cases of acute inflammatory process. In cases in which a cerebral abscess is positively diagnosed, it is imperative to open the skull immediately. If the case proves to be one of brain abscess it may be possible to find and to evacuate it, and thus to save the patient. If the case proves to be one of meningitis, this procedure will not hasten the fatal termination. The results of surgical treatment of the intracranial complications of otitis media have been more and more favorable as the operative technique has improved. In the cerebellar cases reviewed by the writer, characteristic symptoms are often lacking. He calls attention, however, to the cerebellar seizure. This consists of sudden unexpected attacks of extreme vertigo, roaring in the head, relax-

ation of the limbs, and falling to the ground in a semiconscious state. These attacks are sometimes accompanied by temporary blindness and tonic spasms. They occur especially with tumors which lie in the angle between cerebellum, pons, and medulla. This place is also a frequent site of abscess.

Meniere's Disease and Meniere's Symptoms.

E. Amberg (*American Journal of the Medical Sciences,* July, 1906) says the triad, hardness of hearing, vertigo, and tinnitus, is given as constituting the functional disturbance observed in the so-called Ménière's disease. These symptoms occur also in numerous affections which are not based on the pathologic findings as described by Ménière in his historical case. The observation that not always a typical picture is present has led to the introduction of other terms, such as Ménière's symptoms, etc., which has proved to be confusing. Even affections of the middle ear, of the outer ear, or of other parts of the body can cause the symptoms described by Ménière. These latter causes can be diagnosed in many instances and prove the existence of a great group of affections characterized by functional disturbances of the inner ear. By abandoning the terms Ménière's disease and Ménière's symptoms a more definite nomenclature can be introduced. This is important, not only from a physiologic and pathologic standpoint, but also from a clinical standpoint. By using, for instance, the terms internal syphilitic otitis, or leukemic, or angioneurotic, or gastric, a clearer conception of some affections would ensue. The various terms should be agreed on. The many international medical meetings give ample opportunity for such a procedure.

GYNECOLOGY AND OBSTETRICS.

Tuberculosis of the Ovary.

A. Cornil (*British Gynecological Journal,* February, 1906) in a communication to the International Congress on Tuberculosis pointed out that tuberculosis of the ovaries is rare compared with that of the tubes. That disease affects the body of the uterus not infrequently, but the collum very seldom. There is often no tuberculosis of the other abdominal viscera associated with the adnexal disease, and pulmonary phthisis is rarely found with tuberculosis of the genital organs; there is, as it were, an antagonism between the two affections. Cornil has been able to

collect only nine cases of tuberculosis of the ovary. It may arise from the extension of the lesions of tubercular peritonitis to the ovary. One finds a sort of tumor formed by a mass of subperitoneal granulations penetrating the interior of the ovary and intimately adherent to that organ. The germinal epithelium on the surface is preserved, and one may see adhesions between the peritoneum and the ovary formed by a tubercle, which is then the original source of infection. When the ovary is infected from the tube the disease assumes a special form, and there are tuberculous follicles in the ovary resembling those in lymphatic glands. There is, however, occasionally tuberculous infiltration of the corpora lutea, and not merely of old ones, but of such as are in course of formation, in which the developing vessels and healthy connective tissue cells are abundant. It is in the corpora lutea that the ovary is most prone to develop new growths, tubercular or otherwise.

Diagnosis and Significance of Decidual Tissue.

W. P. Graves (*Boston Medical and Surgical Journal,* July 26, 1906) says that the passage of a decidual membrane in a patient with symptoms of pregnancy and with a mass on one side, together with a history of flowing, is extremely significant of an extrauterine pregnancy, but cases do occur where this seemingly conclusive chain of evidence is not proof of an extrauterine gestation. An ordinary miscarriage may be preceded by the exfoliation of a part or the whole of the decidua vera. The pathologist who receives a specimen of decidual tissue should make his report with extreme reservation, to avoid the commission of a serious surgical blunder. It may be impossible to differentiate, even with the greatest microscopical care, between an exfoliated dysmenorrheic membrane and the decidua of an extrauterine pregnancy, and the pathologist before committing himself to a diagnosis should insist on knowing accurately the history of the patient.

Ovariotomy During Pregnancy.

A. Graeffe (*Zeits. f. Geb. u. Gyn.,* July, 1906) reports four new cases; and after discussing the more recent publications on this subject concludes that even in pregnant women ovarian tumors should be removed as soon as possible, but the decision as to whether by the abdominal or vaginal route depends upon the way in which the operation can be performed most quickly and simply.

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ORIGINAL CONTRIBUTIONS.

THE ACCUMULATIVE EXPERIENCE OF THE PROFESSION IN THE USE OF ROENTGEN RAYS IN THE TREATMENT OF ACNE, ACNE ROSACEA, ECZEMA, AND PSORIASIS.*

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The true test of the value of a therapeutic agent must ultimately rest in the practical use to which it can be and is put by the clinician. While the wonderful advance made in the art of radiography is acknowledged by the profession and the laity alike, the same recognition is not accorded to radiotherapy, either by the profession or the laity.

On July 12 I accepted, therefore, the courteous invitation of the Executive Committee of the American Roentgen Ray Society to ascertain for this body the experience of the profession in the use of Roentgen rays in the treatment of acne, acne rosacea, eczema, and psoriasis, four of the more common affections met with in a dermatological practice. It was suggested that a sufficient trial had been given to this line of treatment—nearly a decade—for us to have determined the practical value of the rays as a therapeutic agent, and that I might as a member of the American Dermatological Association voice the accepted views of the association in the use of Roentgen rays in the treatment of these more common diseases of the skin.

That I might not misinterpret the views of the profession and might have at hand some definite knowledge upon which to draw conclusions, I drafted, not only to the active and honorary mem-

*Read by invitation before the seventh annual meeting of the American Roentgen Ray Society at Niagara Falls, N. Y., Aug. 29 to 31, 1906.

bers of the American Dermatological Association, but to many other members of the Section on Cutaneous Medicine and Surgery of the American Medical Association, to recognized dermatologists of Ontario, Great Britain, Germany, and France, and to members of this body, the following communication:

Denver, July 13, 1906.

I have been requested by the Executive Committee of the American Roentgen Ray Society to present a paper at the meeting next month outlining our experience with the use of Roentgen rays in the treatment of acne, acne rosacea, eczema, and psoriasis.

I would appreciate it very much if you would grant me the benefit of your experience and views with permission to publish, by answering in substance the following questions:

1. (a) Has the use of Roentgen rays been found beneficial in the treatment of acne, acne rosacea, eczema, and psoriasis? (b) If so, in which stage or type of the respective diseases have the exposures to the rays been found useful? (c) When contraindicated or harmful, and when of doubtful value?

2. (a) Are the exposures preferred as the routine treatment, or are they applied to the rebellious cases only? (b) Is the duration of treatment shortened? (c) Are more permanent results secured?

3. (a) Has the use of the rays been as helpful as anticipated, or have they proved more or less of a disappointment in the treatment of these diseases? (b) Wherein lies, in your opinion, the causes of failure?

4. Any other information which will aid me to record definite knowledge of actual experience in the treatment of these diseases.

As so much of the success in the use of a therapeutic agent depends upon the general knowledge, experience, dexterity, and personality of the operator, and his knowledge and attention to details, it would have been more satisfactory and interesting, and we would have arrived at more practical conclusions, had we been able to draw from him his knowledge and technique: but as it would have been impossible to judge from his writings the technique and personal equation of the operator and their relative value, it is assumed that each employs in his work such methods as have in his experience seemed best. Therefore, no question is raised as to the make and character of the tube, whether of high or low vacuum, whether attached to the coil or to the static machine: or as to dosage, or to distance, or to duration or frequency of exposure, and other minutiæ. It is assumed also that we all are familiar with these common diseases. We all know the conditions which predispose to acne, to acne rosacea, to eczema, and to psoriasis, the pathology and the tried routine treatments for each are familiar to us. No one of us would deny to proper diet, to exercise their influence upon acne: nor its relation to gastrointestinal and utero-ovarian troubles. No one of us would deny that the condition of an acne rosacea is aggravated by the use of hot drinks, tobacco, alcohol, improper food and feeding. No one would question the wide field of cause and

effect of an eczema, its interdependence upon other constitutional diseases and upon external influences. Those of us who are essentially clinicians recognize that there is a type of psoriasis which so closely resembles eczema seborrheicum as to be with difficulty differentiated. (Norman Walker doubts if the line of differentiation can be drawn.) The lesions of this type of psoriasis, presenting a greasy, slightly scaly, inflammatory appearance, we all know are the more amenable to the ordinary means of treatment. The question simply is, knowing all these things, have we found by actual experience that the use of the Roentgen rays is of value in the local treatment of these diseases —have the rays supplanted entirely other forms of treatment? If of value, how does this form of treatment compare in efficiency with other tried measures?

I believe the time has arrived when the profession at large would have this society place an estimate on the use of Roentgen rays as a therapeutic agent, and to this task, in so far as their use relates to the four diseases selected for me, I have applied myself.

At the twenty-ninth annual meeting of the American Dermatological Association, held in New York City December 28 to 30, 1905, Dr. Henry W. Stelwagon, of Philadelphia, read by invitation a paper entitled "Additional Observations on the Use of Roentgen Rays in Dermatology," and in the extended discussion which followed most of the members present expressed views.

The conclusions set forth are drawn from the replies received from my communication, from Dr. Stelwagon's recent article (*Journal of Cutaneous Diseases*, March, 1906), from the views expressed by members present at the reading of his article, from writings of other members of the profession, and from my own clinical experience and observations: but in order that each may form his own opinion the premises upon which the conclusions are drawn are attached below, the italics being mine.*

The answers are probably as uniform as to experience as one would expect from so extensive a field of observation and variety of interests, the only serious difference of opinion being the estimate to be placed upon rays in the treatment of acne. As one would expect, those who lean more toward radiotherapy claim greater reward by reason of their more intimate knowledge of x-ray therapy, better technique, and personal application to details, and adhere to this method either for want of a familiarity

*To appear in full in the next Transactions of the American Roentgen Ray Society.

with others or because most frequently all other means have been exhausted before the patient has been referred or has on his own initiation applied to him for relief. His cases are selected for him; the radiotherapist is expected to try radiotherapy. Those who are more inclined to dermatology lean by reason of their experience with other remedies to other methods. Many dermatologists, notably Prince A. Morrow, H. H. Whitehouse, Arthur Hall (Sheffield), and J. C. Johnston, have not been sufficiently impressed with what they have seen of other men's work to adopt the use of Roentgen rays as a therapeutic measure; and others after an experience have discarded their use in the treatment of these diseases, notably Gottheil, whose views are so antagonistic to *x*-ray therapy as to invite attention. He says that in his judgment it is entirely improper to ray acne, acne rosacea, eczema, or psoriasis.

Leslie Roberts (Liverpool) writes: "In reply to your questions relating to the *x*-ray treatment, I may say that I consider the treatment of acne rosacea, eczema, and psoriasis by *x*-ray to be irrational, improper, and utterly inadmissible on scientific grounds. I am afraid that those who talk of 'curing' these diseases by rays do not clearly understand the nature of the diseases."

Of the four diseases, the greatest difference of opinion exists as to the estimate to be placed upon the value of Roentgen rays in the treatment of *ACNE*. Though many, including Hyde and Montgomery, Neumann, T. Colcott Fox, H. G. Brooke, Leredde, John McMaster (Toronto), Breakey, R. R. Campbell, Arthur Whitfield, Rudis-Jicinsky, H. C. Baum, Geo. M. Mackie, Rollins H. Stevens, Stelwagon, Lustgarten, Bronson, Gilchrist, Engman, G. W. Wende, Hutchins (Atlanta), give testimony to the efficacy of the rays, only Pusey, D. W. Montgomery, Grindon, Howard Morrow, Varney, and Burnside Foster of the dermatologists acknowledge their use in daily routine treatment. Varney reports a series of fifty cases treated. Charles Lester Leonard would apply radiotherapy to obstinate conditions of acne, giving credit for success to his knowledge of the efficiency and limitation of his agency and to this technique. Kassabian uses the rays as a routine treatment in all cases in connection with hygienic and systemic treatment; but Hyde and Montgomery, Hartzell, Winfield, Darier, D. King Smith, and most other observers would confine their use to the chronic rebellious, deep-seated, sluggish, indurated, staphylococcic, pustular type. Bulkley, J. C. and C. J. White, Bowen, Corlett, Ravogli, and others deprecate their use

except in very obstinate cases, and the New York Skin and Cancer Hospital (see abstract from Dr. Fred Wise's article) and Gottheil have discarded the use of the rays in the treatment of this disease, as being inappropriate for radiotherapy. Max Joseph has seen no lasting results follow.

Quoting from the report of C. J. White: "Theoretically *x*-rays should benefit acne, through their inhibitory effect on highly differentiated structures. The amount of *x*-ray exposure necessary to depress glandular activity seems to be a very variable factor, if one is at the same time to keep within the limits of safety; and probably with safe exposures much more time is necessary than we would desire."

The late Dr. Charles Allen took exception to Dr. Stelwagon's statement that "the best and quickest results are, as a rule, only obtainable after the production of a mild erythema," but W. G. Brooke, Gilchrist, and others agree with Stelwagon that the production of a transitory redness seems necessary. Allen believed that the rays should be expended on the deep follicles and glands, and most of us are agreed that the exposures should be mild and of short duration.

Acne Rosacea.—It is generally conceded by those who report benefit that the greatest good is achieved in those cases in which the sebaceous glandular inflammation predominates; that but little effect is made upon the dilated vessels and none upon the tumefaction of the nose. But few, however, report much progress, and my own experience has been very disappointing. An exception to this is found in the favorable reports of H. G. Brooke, Rudis-Jicinsky, James Galloway (London), the Whites and Bowen of Boston.

Eczema.—Though the field of cutaneous maladies covered by the term eczema is very broad, I think we will agree that to no other stage or type of the disease than the chronic, localized, indurated patch, found as a type on the palms of the hands or on the soles of the feet, conditions which have resisted all other forms of treatment, is radiotherapy applicable. Some would apply the therapy to the subacute stage; all would exclude its use in the acute, in the eczemas of childhood (except in obstinately chronic cases), and in an eczema "otherwise easily managed." "The action of the *x*-rays on eczema we have accustomed ourselves to explain by the selective action on the cells composing the infiltration of the corium, and by their stimulating effect on the process of cornification, thereby causing more active exfoliation of the corneum" (C. J. White).

Psoriasis.—Though Pusey uses the rays in the routine treatment of psoriasis, and D. W. Montgomery in his routine treatment of psoriasis of the nail, and though the latter advises their use in the acute exacerbations, most observers would limit radiotherapy to the persistent large infiltrated plaque or aggregated smaller lesions, which nothing else seems to affect with any degree of permanency. But three observers (C. J. White, James Galloway, and Rollins H. Stevens) admit it to be of any value in cases of extensive distribution. With some, as Prof. Dr. Neisser, the lesions have responded promptly to treatment, but with others all attempts have ended in failure (see Dühring's and Gottheil's remarks). Recurrence seems to be as frequent as with other methods of treatment.

J. C. White, Bowen, Charles J. White, and Burns report approximately forty cases treated during the last five years, a very large majority of which have reacted favorably. "Increased metabolism in the rete mucosum and stimulation of the process of cornification would seem to account for the favorable action of the *x*-rays in psoriasis," in their opinion.

CONCLUSIONS.

I feel justified in presenting the following conclusions, which I trust will be ratified or modified to meet the views of the members, that the result may be an authoritative expression of this society:

Time, a decade, through the experience of a large number of competent observers, has given to Roentgen rays a valuable and, by reason of improved methods for the measure of dosage and perfection of machinery and technique, an ever-increasing usefulness as a therapeutic agent in the local treatment of acne, acne rosacea, eczema, and psoriasis.. Conservatively used, with due regard to their well-recognized dangers, especially in these non-malignant dermatoses, a knowledge of their efficiency and limitations, and with proper technique, they are useful in selected cases, not as a routine nor as the only treatment, but as an addition to our other remedies, especially in those cases which have resisted ordinary treatment, and in which there is a marked infiltration of the tissues.

Acne.—While *x*-ray therapy is applied by a few to all types of acne, it finds its greatest usefulness in the rebellious, indurated, deep-seated, sluggish, staphylococcic, pustular type, which have resisted all other measures. As a routine treatment the dangers to the face from exposure even with the best technique outweigh

its advantages over other tried measures. In every case the exposures should be given with caution; they should be mild and of short duration. The rays seem to exercise their greatest influence in those with coarse seborrheal and pale, pasty skins, with a natural predisposition to acne and comedones.

Although the experience of operators seems to vary greatly as to the time necessary to effect a cure, it would seem that the more permanent results are obtained in those cases in which exposures are given in cycles. The preponderance of opinion is to the effect that, though the time for effecting a cure is not materially lessened, cases otherwise incurable are much benefited and relapses are less frequent.

In *acne rosacea* the results are not brilliant. The influence is greatest in those conditions in which the glandular inflammation predominates. The effect on the dilated blood-vessels and upon the tumefaction of the nose is not appreciable. The treatment must be prolonged, though in those cases in which improvement is noticed it seems to be shortened in comparison with other methods. The same caution must be observed as in the cases of acne.

Eczema.—The chronic, infiltrated patch, found as a type in eczema of the hands and of the feet, will often yield to *x*-ray therapy, when it has resisted with a dogged persistence all other remedies. In selected cases of subacute inflammation it may be found useful, but it should never be applied to the acute stages of the disease except in cases of unusually severe and protracted pruritus, to the eczemas of childhood, except in most obstinate cases, or to an eczema otherwise easily managed. Some brilliant results are reported, and it would seem that the duration of treatment is shortened, but recurrences are frequent.

Psoriasis.—To the persistent, large, infiltrated plaque, or to the aggregation of smaller lesions, which nothing else seems to affect with any degree of permanency, is radiotherapy applicable with the assurance of good results? The treatment must be prolonged, and relapses are not infrequent. Reports are received of the successful treatment of psoriasis of the nail and of a few cases of generalized psoriasis, but on the whole, except in a few isolated cases, which have yielded quickly and apparently to the influence of the rays, the story is one of repeated disappointment.

The claims of the early enthusiast have not been realized, and such claims seldom are. But in the hands of the competent operator, with the present more accurate means of measuring the dosage, and the gradual improvement in technique, *x*-ray therapy

in general is finding its level, and within its limitations the results are more certain and permanent. Were the dermatologist more expert with the machine and did he give it his personal attention, instead of relying upon the uncertainty of an assistant, and were the radiotherapist a better diagnostician of a dermatological lesion, more uniform results would probably be reported. The causes of failure with the one lies in his ignorance of his agency and his improper technique; with the other, in his inability to recognize the true character of the lesion and its interdependence upon other constitutional conditions.

Ignorance, faulty judgment, and inexperience of the operator (defective technique), overconfidence and rashness or timidity in its use (for I believe with the history of past mishaps as their precedent more men under- than overexpose), have done much to belittle the value of *x*-ray therapy. To this may be added as causes of failure: defect of machinery, uncertainty of reaction in the individual skin, inability of the operator from one cause or another to select cases appropriate for treatment, time and expense necessary to a successful outcome, and uncertainty of results.

The dangers, namely, permanent telangiectasis, warty growths, burns, atrophy or increased and permanent pigmentation of the skin, growth of downy hairs, etc., should always be kept in mind. Fortunately, the burn is of less frequent occurrence, but the dilated blood-vessels and the atrophy may not present themselves for several months after the exposures have been discontinued, even when the exposures have been mild and have produced little or no inflammatory reaction (Hyde and Montgomery). And so we find that *x*-ray therapy is contraindicated in all types of acute inflammation or during acute exacerbation of a chronic condition, and in childhood, when the skin is too delicate and dangers are too serious, except as a *dernier ressort*.

The most successful practitioner will be he who combines an extensive clinical experience with a thorough knowledge of the principles and practice of Roentgenology; he who, never neglecting an opportunity to improve his knowledge of the one, keeps himself abreast the advances of the others.

SPASMODIC STRICTURE.

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Spasmodic stricture—or, more properly, pseudostricture—is a diminution of urethral caliber due to spasmodic contraction of the muscular fibers in and about the wall of the canal. Clinical experience should have taught the surgeon at a very early period the possibility of such a condition as spasmodic stricture, but such was not the case. The varying caliber of the urethra during treatment for organic stricture, or during the course of that disease unmodified by treatment, is strikingly suggestive of the element of spasm. It will often be found that a stricture that will at one sitting admit a sound of fair size will at another time only permit the passage of a small instrument or perhaps none at all. Complete retention may occur at any time from acid urine, intemperance, or sexual indulgence. To be sure, spasmodic contraction is often associated with congestion and inflammation, but even here spasm is the preponderating condition. Again, the passage of an instrument may be obstructed until after gentle pressure, when it will pass the point of contraction quite readily. The grasping of the instrument by the urethral walls in withdrawal conclusively proves the existence of spasmodic contraction.

Notwithstanding the facility of demonstration of spasmodic stricture, its existence was not accepted until Hancock and Kölliker demonstrated muscular fibers in the urethral walls. Their researches, although valuable, unfortunately led to the belief that contraction of these fibers was the essential element of spasmodic stricture. A comparison of the mechanical effects of spasmodic stricture with the power of the muscular fibers that were first supposed to be chiefly involved in spasm will readily demonstrate the fallacy of this belief. The planes of muscular tissue are chiefly longitudinal, and so sparse that, no matter how firmly contracted, they are incapable of producing serious obstruction. We must, therefore, look further for the seat of the spasm, and seek for structures the function of which is to normally obstruct the canal and prevent the escape of urine. A group of such structures is found in the cut-off muscle of Cruveilhier, and it is at a point corresponding to this that the

principal spasm occurs. The last few drops of urine or semen are normally expelled by the accelerator urinæ and compressor urethræ muscles; the cut-off muscle simultaneously closes the deep urethra—*i.e.,* the vesical neck. Spasmodic stricture is a mere exaggeration of this physiologic function, in which, from irritation, the muscle is spasmodically contracted and the volitional power of urination temporarily inhibited. The accelerator urinæ and compressor urethræ muscles play only a minor part in such spasm, the chief factor being the contraction of the voluntary cut-off muscle. A certain amount of spasm produced by contraction of the circular fibers—compressor urethræ muscle—may occur anywhere in the canal. This explains in part obstruction to instrumentation in penile strictures of large caliber. This spasm also facilitates exploration with bulbous instruments. It is by spasmodic contraction that the sensitive urethra resents at diseased points the passage of the bulb, thus giving evidence of obstruction.

There are nearly always two points of spasm: (*a*) the seat of irritation, and (*b*) the musculomembranous region.

1. When a foreign body is introduced the urethra resents its presence by contraction at the point of irritation, and simultaneously by reflex spasm of the cut-off muscle. The same holds true in penile organic strictures, especially those at the meatus. Instruments produce stretching and irritation of the lesion in the anterior portion, reflexly exciting spasm of the deep urethra; so that in a large proportion of cases of stricture there are at least two points of obstruction—one at the diseased point impinged upon by the instrument, and another in the deep urethra. The same phenomenon results when the anterior obstruction is a congenital stricture or point of normal contraction. This is important, for, simultaneously with the removal of the anterior point of obstruction and irritation, the supposed deep organic stricture usually disappears.

2. The entire canal may be spasmodically contracted and resent the introduction and withdrawal of instruments.

3. The musculomembranous region may alone be involved. This happens where an organic lesion exists in the deep urethra and also in reflex spasm.

I. *Predisposing causes:* (*a*) General hyperesthesia; (*b*) local hyperesthesia. These conditions are modified by a nervous temperament, debility and cachexia, the rheumatic and gouty diatheses, intemperance, high living, faulty sexual hygiene, etc. (*c*) Acute or chronic genito-urinary disease. This is the most

frequent predisposing cause; indeed, spasmodic stricture is rarely met with where a more or less damaged urethra does not exist. So uniformly is it present that it is always to be suspected until organic disease has been excluded by exploration. Congested and fungating patches, mucous erosions, acute and chronic urethritis, and organic stricture predispose to spasmodic contraction, both at the point of irritation and at the cut-off muscle. Congenital narrowing of the meatus or other parts of the canal may give rise to reflex spasm of the deep urethral muscles whenever an instrument is passed of sufficient size to produce stretching of the sensitive tissues at the point of contraction. As already noted, when instruments are introduced under these conditions there is spasm at the site of the lesion, and also deep in the canal.

II. *Exciting causes:* (1) Passage of instruments; (2) sexual excitement or excess; (3) urethral injury, chemic or traumatic; (4) a debauch; (5) cold-taking; (6) foreign bodies; (7) drugs, such as cantharides and turpentine; (8) reflex irritation; (9) malaria (?); (10) mental emotions.

In surveying the various exciting causes of spasmodic stricture it will be observed that in nearly all instances spasm is associated with congestion or inflammation, conditions that such special causes are most apt to develop. Spasm due to drugs is usually associated with considerable inflammation, with frequent and painful micturition, and possibly urethral hemorrhage. The most frequent exciting causes are intemperance, exposure to cold and wet, and sexual excess. Highly acid urine in gouty patients is said to act as an exciting cause *per se*, but it is doubtful if such a condition of the urine can cause obstructive spasm in a healthy urethra. Again, the existence of a perfectly sound urethra in gouty patients is open to question. Acid urine is an important element in spasm, due to excesses of various kinds and cold-taking superadded to organic disease. Instrumentation of a sensitive canal, especially if organic disease exists, is likely to develop spasmodic stricture, which may last for some days or weeks.

Cases of intermittent spasm due to malaria and curable by quinine are recorded, but it is questionable whether malaria alone can act directly as an exciting cause; that it may predispose to spasm is admitted.

In passing instruments into the virgin urethra, and in delicate and nervous patients—whether organic disease exists or not—the instrument is apt to be obstructed by spasm in the deep urethra. The obstruction generally gives way under gentle, continuous pressure with the beak of the instrument. In withdrawing the

instrument a sense of biting or grasping upon it is felt by the operator; the patient may herself experience a sensation of urethral traction.

It is a common observation that some individuals cannot urinate in the presence of others. This is usually regarded as spasmodic stricture from mental emotion, but is probably due to psychic inhibition of volitional power over the cut-off muscle and the normal involuntary contraction of the detrusor urinæ, rather than to spasm.

Reflex spasm of the cut-off muscle most often arises from irritation of structures bearing a direct relation to the genito-urinary tract through community of nervous supply; diseases of the bladder, kidneys, rectum, and anus are very apt to produce it. Retention is not uncommon after forcible stretching of the sphincter ani in operations for hemorrhoids, fistula in ano, and rectal stricture. Inflammation in and about the perineum may produce retention through spasm, independently of pressure.

The possible occurrence of deep spasmodic stricture should be considered in every vesico-urethral disease. The point from which irritation is reflected may be above or below the site of spasm—*i.e.*, the perineo-urethral muscles.

The urinary flow may be greatly lessened during a gonorrhea, and yet be sufficient for physiologic needs, when suddenly retention occurs, and this without extension of inflammation to the deep urethra or bladder. Such retention usually means a deep extension of inflammation, but the retention is not so sudden, and is preceded by symptoms of prostatic or vesical irritation. In chronic prostatitis and cystitis with or without calculus sudden retention may occur. Congestion is the primal cause of obstruction in such cases, but it is the reaction of the muscular structures to irritation that brings about the sudden and final occlusion of the urinary way. Spasm plays the principal rôle and congestion the preparatory.

In prostatic hypertrophy the least disturbance of the usual regimen or the slightest venereal or dietetic excess or exposure causes congestion of the deeper parts of the urethra. This may excite reflex contraction of the surrounding muscles, with consequent retention.

Some interesting examples have been cited where irritation of neighboring parts has produced spasmodic retention. Thus, Le Dentu cites a case of testicular neuralgia, the exacerbations of which were accompanied by spasmodic retention. He also calls attention to the providential spasmodic retention that often pre-

vents urinary extravasation in wounds of the urethra and perineum.

Uterine affections have been known to cause spasmodic retention, and it is probable that postpartum retention often has a strong spasmodic element.

It has been held that injuries of parts very remote from the urinary apparatus may produce spasmodic retention; thus, a fall upon the knees, fractures of the ribs, surgical operations (such as laparotomy), and many other accidents of a traumatic character are sometimes associated with retention. It is doubtful if this retention is due to spasm. Inhibition of the detrusor urinæ or of volitional power over the cut-off muscle, due to shock, brain concussion, or spinal concussion, seems a more logical explanation. There may, however, be apparent retention—*i.e.*, suppression—due to reflex inhibition of renal secretion, especially after abdominal operations. Obtunding of vesical sensation from shock or concussion may have much to do with the temporary retention. In slighter cases exaltation of emotional sensibility may be a causal factor. A patient who has been operated upon or seriously injured, and is compelled to use a duck or bed-pan, often with an attendant close at hand, sometimes experiences a temporary inhibition of voluntary control over the cut-off muscle.

Urethrismus, or chronic spasmodic stricture, is occasionally seen. This condition may result from various more or less remote sources of irritation. It may be caused by chronic abscesses in and about the genito-urinary organs. Fessenden Otis has reported a very interesting case of this kind due to fistula and chronic abscess of the scrotum and testicles.

In a large proportion of penile strictures a sound large enough to put the contraction on the stretch either will not enter the bladder or does so with great difficulty. A bulbous, flexible bougie of any size will not enter at all, and even if a small one does pass the deep urethra it is firmly grasped on withdrawal, the sensation imparted to the hand being not always deceptive to the expert, but to the surgeon of little or moderate experience constituting irrefutable evidence of deep organic stricture.

The association of spasmodic contraction of the deep urethral muscles with renal disease has not received special attention. It is an element, however, of the painful and frequent micturition incidental to nephric stone and pyelitis. I have a case now under observation in which there was marked urinary obstruction coincident with an acute exacerbation of pyelitis, although the urethra had previously been entirely free from obstruction. In

such cases there may be associated with the spasm more or less reflex neuralgic pain in the back, groins, hypogastrium, and thighs. It should, of course, be remembered that there exists in these cases a special irritating factor—*i.e.*, morbid urine.

Diagnosis.—The diagnosis of spasmodic stricture is usually easy, especially where retention occurs suddenly. It is obvious that the sudden occurrence of retention in organic stricture or other obstructive lesion of the genito-urinary tract, in which the stream of urine has previously been fairly free, must depend upon some complication—either inflammation and congestion at the site of the organic lesion, or spasmodic contraction of the cut-off muscle, or the two combined. Inflammation or congestion is to be inferred in every case of spasmodic retention, and demands due consideration; the predominating element of spasm is, however, the principal feature. As a rule, in cases of sudden retention of this kind there is a history of some one or more of the exciting causes that have been enumerated.

In the diagnosis of spasmodic retention it should be remembered that in by far the majority of cases there is some organic foundation for the condition. When, in the course of treatment for organic stricture of small caliber, retention suddenly occurs, the predominating condition is usually congestion or inflammation. The occurrence of acute urethritis during the course of organic stricture is likely to superinduce sudden retention. The condition in these cases, although a spasmodic element exists, is mainly congestion and inflammation at the site of the stricture, producing sufficient swelling to completely occlude the urethra for the time being. Traumatic urethritis causes retention in the same way. In strictures of larger caliber in which the passage of urine is comparatively free, spasmodic retention may suddenly develop. It is doubtful whether congestion or inflammation alone could produce complete closure of the canal in such cases.

It is sometimes difficult to determine during instrumentation what proportion of the obstruction is due to organic contraction and what to spasm. For example, after an instrument has passed a stricture of large caliber in the penile portion of the urethra, or an inflamed and irritable meatus, it will often be obstructed on entering the membranous region. A steel sound is less likely to be obstructed than a flexible bulbous bougie, and the spasm is more likely to yield to steady and gentle pressure with the point of the sound than to the bulb. If there is a slight organic contraction at the bulbomembranous junction, a steel instrument

small enough to pass the stricture in the anterior portion of the canal will, in all probability, slip by the deeper constriction and fail to detect it. A large bulbous instrument usually fails to pass altogether, but if a small bulbous bougie be introduced, it will be found that the spasm of the surrounding muscles, although not sufficient to prevent the instrument from entering the bladder, will contract the stricture so that the shoulder of the bulb catches upon it as it is withdrawn. The peculiar feel imparted to the bougie and the sudden snap produced by the passage of its shoulder through the organic contraction will show the character of the case.

It will thus be seen that a comparatively small bulb may detect an organic contraction with predominating spasm in the deep urethra where a steel sound of considerable size would fail. The peculiar sense of elasticity imparted to the instrument as it presses against the portion of the urethra spasmodically contracted gives the expert a tolerably accurate idea of the real condition of affairs. Because of the spasm usually encountered there are few individuals in whom deep stricture cannot be demonstrated by a bulb. If, however, a very small bulbous instrument be passed and slowly withdrawn, organic contraction can usually be excluded. The ordinary sound cannot be relied upon for a diagnosis.

Exceptional cases of chronic spasmodic stricture are met with in which the real condition can only be demonstrated after the subtraction of all sources of irritation, direct or reflex, when the supposed organic stricture disappears.

Referring to spasm in the penile urethra, it is important to know that in many cases denominated penile "stricture of large caliber" the urethra is not organically strictured, but as instruments pass over a thickened granular and hyperesthetic patch there occurs at the site of the lesion spasm of the accelerator urinæ and compressor urethræ muscles, giving rise to the same objective symptoms as organic stricture. It is probable that urethrotomy is often performed where true organic obstruction does not exist, the condition just described explaining the obstruction to instruments and the grasping of the bulb as it is withdrawn. This, however, is not necessarily an argument against the necessity for urethrotomy.

Treatment.—The first indication in the treatment of spasmodic stricture is the removal of all predisposing causes so far as possible. Such conditions as the gouty and rheumatic diathesis require correction. General nervous irritability and hyper-

esthesia demand nervine tonics, sedatives, or antispasmodics, according to special indications. The principles of genito-urinary and sexual hygiene should be thoroughly impressed upon the patient's mind. Once he is convinced of the fallacy of the notion that his penis and testes are the axis of his earthly existence, the surgery of the case is much simplified. All sources of local and reflex irritation must be removed. This necessarily involves, as a rule, the cure of organic urethral lesions. The urine should be kept bland and non-irritating by dietetic measures and the administration of alkaline remedies. Careful study should be given to the degree of tolerance of the urethra for instruments. The amount of irritability of the urethra and the degree of spasm excited by instrumentation constitute a fair criterion of the frequency with which they should be introduced in the treatment of organic stricture.

In spasmodic retention an attempt should be made to relieve the condition by derivation—to remove possible congestion—and antispasmodics. The passage of instruments should be avoided, if possible, as tending to increase irritation and spasm. The full hot bath and morphine by the mouth or hypodermically should be depended upon so far as practicable. The patient often succeeds in passing urine while in the hot bath, which is both derivative and sedative. When these simpler measures fail, a small, soft catheter should be passed—while the patient is in the bath, if possible. Chloroform or ether may be given to the extent of full anesthesia, if necessary, to relax the spasm and facilitate instrumentation. When retention comes on in organic stricture, it must be remembered that it is not due to organic contraction *per se,* but to certain plus conditions—*i.e.,* spasm, congestion, and edema of tissue in varying proportions. Relief of retention depends upon the subtraction of these plus conditions from the primary predisposing factor of organic contraction. The treatment of urethrismus is chiefly operative. After all sources of reflex irritation have been removed, the urethrismus disappears.

The Health Bureau at Manila gave free vaccination to prevent the spread of cholera during the recent epidemic. A test made of the vaccine since the outbreak of the disease showed that it acts as an absolute preventive. Of the many natives in the infected districts who have been treated with the virus, none developed the disease. All of the health officials were vaccinated, and none developed the disease.

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EDITORIAL ARTICLES.

UPON WHOM MUST REST THE ULTIMATE RESPONSIBILITY OF X-RAY THERAPY?

At the recent annual meeting of the American Roentgen Ray Society, held at Niagara Falls, August 29 to 31, much discussion was elicited by a paper presented by Dr. Biddle (published in this issue of the MEDICAL AGE) as to the estimate to be placed on the value of Roentgen rays as a therapeutic agent in the treatment of skin diseases. The members present, especially expert in Roentgenology, maintained that the reason others did not obtain the same favorable results as they did was because of their ignorance of the agency they were employing and faulty technique, and argued further that all cases to be exposed to rays should be placed in their hands. Dr. Biddle replied, acknowledging that the dermatologists admit that they had much to learn of their confrères, the Roentgenologists, but that they were willing and anxious to improve their knowledge and technique. He, however, warned his confrères that, on the other hand, they had much to learn respecting the true character of a dermatological lesion. He cited cases, which come to the notice of every dermatologist, of conclusions based on faulty diagnosis and of valuable time lost to the patient from this lack of knowledge, and ended by stating that in his opinion, in which it seems to us all must concur, the ultimate estimate to be placed upon a therapeutic agent must rest with the clinician skilled by long experience in diagnosis and treatment, versed in the advances made in all departments of therapeutics, ever ready to perfect himself in a new art, and unprejudiced enough to select for the particular case at issue the remedy in his judgment best fitted to

bring forth a favorable outcome. Ray therapy is not infallible, nor is it to be applied indiscriminately to all seeking its use. The same selected care must be enjoined here as in other remedies.

We must first know what we are treating, and then apply the appropriate remedy. Yet none should attempt the employment of a remedy, however beneficial, which embodies perfection of technique without perfecting himself in its use and keeping himself constantly in touch with its advances.

EDITORIAL NOTES.

Infection from Milk.

Quite recently several outbreaks of infectious disease have been traced to milk which has been shown to be the means of spreading such diseases among the persons who consume it. Scarlet fever is one of the diseases most commonly carried by milk. It has been demonstrated that the germs of this disease occasionally find their way into milk, where they appear to thrive. These germs may get in because some one suffering from scarlet fever has been milking the cows, and it has also been thought that the disease may be caused by the animal being itself the source of infection. Besides scarlet fever there are other diseases, the germs of which grow and are conveyed in milk. Of these typhoid fever, tuberculosis, and diphtheria appear to be the chief. The germs of typhoid fever usually find their way into milk from the water which is either used to wash the vessels into which the milk is put or is added for the purpose of dilution. Much can be done to prevent the spread of infectious disease from milk by having dairies and cow sheds kept thoroughly clean and well ventilated. Local health officers ought to be given the assistance of a competent veterinary surgeon, whose duty it should be to rigidly inspect at given intervals all dairies within a certain district.

Fatalities in Athletic Games.

The season of that strenuous game, football, is now upon us, and with it will come the annual discussion of the fatalities and proprieties of athletic games. One of the most trustworthy collections of statistics of these fatalities for the year 1905 was recently published in the *British Medical Journal*. From this journal it appears that the whole number of deaths collected was

128, of which 50 were due to diseases and 78 to accidents of different kinds. Of the accidental deaths football was the game mentioned in 28 cases; baseball in 12; horse-racing in 9; boxing in 6; gymnasium feats in 3; and auto-driving in 2. The other fatalities were equally divided between golf, hammer-throwing, bicycle coasting, handball, polo playing, and wrestling. Of the accidental deaths, the average age was twenty years. The causes of death in football were: abdominal injuries, 7; dislocation of the spine with paralysis, 3; concussion of the brain, 5; fracture of the skull, 5; cerebral hemorrhage, 2; fracture of a rib with wound of the heart by spicula, 2; and fracture of the spine, 1. The causes of death in football were: blow over the cardiac area, 5; head injuries, 4; blow over the abdomen, 1; and heart failure while running, 1. Fractures of the skull were the cause of death of nine jockeys. It is thus shown that football holds a commanding position in the number of fatalities. Injuries are undoubtedly greater in football than in any other of the major sports. Perhaps the new rules under which the game will be played this season will tend to decrease the number of injuries. We sincerely hope that such will be the case.

Sanitation of Restaurants.

That the majority of the cheap eating houses in large cities are conducted without much regard to cleanliness is a fact that is pretty generally known. Recently the Chicago Commissioner of Health in discussing this subject said: "Of not less importance than rigid inspection at the slaughter-house and in the market is the sanitation of the restaurants and the limitation of cold storage. There are no doubt many clean restaurant kitchens, but there are also a great many which have no suggestion of cleanliness or sanitation, and this is especially true in a large city like Chicago. With a view of bettering the sanitary conditions and protecting the people from consuming unwholesome food, the municipal authorities ought to license all places where food is cooked and consumed, and such an ordinance should be vigorously enforced by parties under whose jurisdiction it is placed. There is a wide field for improvement in Chicago along the lines herein suggested; yet this improvement ought to be easy, for when it becomes known that certain restaurants are worthy of public patronage because of their sanitary conditions, they will be likely to get the patronage, to the disadvantage of those which are not under such conditions."

ITEMS AND NOTES.

After many years of delay a marine hospital will be erected in Pittsburg, in the grounds of the Alleghany Arsenal.

A committee for the furtherance of cancer research has been formed by the Swedish Medical Society. The chairman is Professor Berg.

Oil City, Pennsylvania, is to have a new hospital, with modern equipments, which will be under the direction of the Oil City Medical Society.

The dedication of the Harvard Medical School will take place, it is announced, on September 26. President Eliot will make the dedicatory speech.

Dr. Maximilian Herzog has been appointed pathologist to the Michael Reese Hospital, Chicago. Dr. Herzog was for several years stationed in the Philippines.

The Indiana State Board of Health has decided to incorporate in its hygienic cautions to schoolchildren the recommendation neither to kiss nor to be kissed on the mouth.

The sixteenth annual meeting of the American Electrotherapeutic Association was held at the College of Physicians, Philadelphia, September 18, 19, and 20, 1906, under the presidency of Dr. William Benham Snow.

The correspondent of *The Sun* in Antwerp says that Dr. Gengou, of the Belgian Royal Medical College, reports the discovery of the whooping-cough microbe. It is said to resemble Pfeiffer's influenza bacillus.

The fourth congress of French-speaking physicians of North America will be held at Quebec in June, 1908, on the occasion of the celebration of the three hundredth anniversary of the founding of Quebec by Samuel de Champlain in 1608.

The South Carolina quarantine stations have been transferred to the general government, and will in future be under the control of the U. S. Public Health and Marine Hospital Service. The transfers are in the form of leases for five years at the nominal rate of five dollars per annum.

An association has been formed at Stoughton, Mass., for the purchase of land and erection thereon of a sanatorium for the treatment of tuberculosis. A site has already been purchased on high ground, the highest between Narragansett Bay and Boston, and it is proposed to build on it a model institution to cost $100,000.

The date set for the meeting of the American Medical Association at Atlantic City is June 4, 5, 6, and 7, 1907. An endeavor was made to arrange dates with the executives of the Congress of Physicians and Surgeons, so that the meeting of one body should immediately follow that of the other, but this was found to be impracticable.

London is about to adopt the ambulance system. A bill providing for the purchase of ten automobiles for such use has just passed the House of Commons, and it now rests with the upper branch of Parliament whether the old method of conveying injured persons to hospitals by means of portable stretchers will be supplanted by the modern apparatus.

Commander-in-chief Tanner, of the Grand Army of the Republic, has recently expressed the opinion that the passage by Congress of an act abolishing canteens from national soldiers' homes after next March was "unwise and a blow at real temperance, besides a restriction of the personal liberties of veterans of the Civil War that ought to be resented."

Among the members of the medical profession in foreign countries who have recently died are Dr. Alexander Bogdanoff, professor of pathology in the University of Odessa, aged fifty-two; Dr. Juan Gonzalez, a well-known physician of Granada, aged ninety-two; Dr. Felix Rymowicz, a leading ophthalmic surgeon of Warsaw, formerly professor of ophthalmology in the University of Kasan; and Dr. Filipp Dosjankoff, emeritus professor of anatomy at St. Petersburg, aged seventy-nine.

True to his promise made to the International Congress on Tuberculosis in Paris last autumn, Behring announces, according to the *Medical Record,* that the new remedy is ready for delivery in small quantities to clinicians who are in position to make satisfactory tests. He is not ready to put the remedy on the market, as it has not yet been sufficiently tested, but hospital physicians will receive it in small amounts free of charge. The remedy, which is called tulase, may be given hypodermically or per os.

An assistant surgeon of the navy who was recently tried by court martial on the charge of cribbing while undergoing an examination for promotion, says an exchange, has been sentenced to dismissal from the service. The court found him guilty of conduct unbecoming an officer and a gentleman, in that during the examination he communicated with a fellow officer and obtained assistance from him in answering questions. The man from whom the accused asked and obtained information was also tried, and sentenced to a loss of fifteen numbers in rank.

The Delaware Antituberculosis Society, which was incorporated recently, will build a sanatorium and dispensary for the tuberculous near Newcastle, on a plot of ground of several acres, given by a member of the Du Pont family. Patients will be cared for in tents until the buildings are completed. The establishment will be constructed along the same lines as those followed at White Haven, and recommended by Dr. Lawrence F. Flick, of Philadelphia. Dr. John J. Black is at the head of the movement, in which many prominent Delawareans are interested.

Five fanatics, says the *Medical Record,* were censured in a verdict rendered by a Rochester coroner recently on the death of a young woman from meningitis. This girl was ill eleven weeks, and was attended only by so-called Christian science "healers," their treatment consisting of prayer and endeavoring to impress upon the mind of the girl that she was not ill, and if she but realized she was "the ideal child of God" her illness would be overcome, and she would be well. The coroner recommended that the Health Bureau proceed against these "healers" under a city ordinance for neglecting to report an infectious disease.

The second annual course of lectures given by the Harvey Society of New York will be opened on October 20, 1906, by Prof. A. E. Wright, of London. Ten lectures are to be given during the year, the lectures and dates being as follows: October 20, A. E. Wright; November 3, C. A. Herter; November 17, W. T. Porter; December 1, J. G. Adami; December 15, George Huntington; January 12, F. J. Benedict; January 26, E. B. Wilson; February 9, S. J. Meltzer; February 23, W. T. Councilman; March 9, Friedrich Muller. The officers of the society for the coming year are Graham Lusk, president; Simon Flexner, vice-president; F. S. Lee, treasurer; George B. Wallace, secretary; and C. A. Herter, S. J. Meltzer, and James Ewing, councilmen.

The Rockefeller Institute for Medical Research has offered scholarships to assist investigations in experimental pathology, bacteriology, medical zoölogy, physiology and pharmacology, and physiologic and pathologic chemistry, to be carried on in the laboratories of the Institute in New York City. The value of these scholarships ranges from $600 to $1000. They are open to men and women who are properly qualified to undertake research work in any of these departments and who will devote their entire time to study. The term of service begins preferably October 1, but by special arrangement may begin at another time.

Four immigration inspectors sailed recently to determine the cause for the great increase of late years in the number of cases of trachoma among immigrants. For sixty days prior to August 4, the Department of Commerce and Labor had assessed in fines on steamship companies $8100 for bringing into this country diseased aliens, most of them suffering from trachoma. For every case proved against the steamship companies a fine of $100 is collected, and the companies are compelled to return the diseased immigrants to the port of embarkation. It is believed that the fault lies with the system of health inspection at the ports of departure.

The health officers of London have, says the *Medical Record*, formulated regulations regarding the importation of canned goods, which provide that the name and address of the manufacturer and the date of canning be impressed on all tins; that one per cent of each consignment shall be opened on importation and examined before the goods are marketed; and that food intended for canning shall be inspected by an independent official prior to being canned. The use of preservatives is strictly prohibited. The Bundesrath of Germany has voted to prohibit the importation of pickled meats unless lymphatic glands are present to make trustworthy examination of the meat possible.

The American Roentgen Ray Society held its seventh annual meeting at Niagara Falls, N. Y., August 29, 30, and 31, 1906. The programme included the names of the best known *x*-ray workers. The officers of the society are: President, Dr. Henry Hulst, Grand Rapids, Mich.; secretary, Dr. George C. Johnston, Pittsburg, Pa.; treasurer, Dr. Leavitt E. Custer, Dayton, Ohio; vice-presidents, Dr. Russell H. Boggs of Pittsburg, Pa., Dr. Clarence E. Skinner of New Haven, Conn., Dr. Ennion G. Will-

iams of Richmond, Va., Dr. Eugene W. Caldwell of New York, N. Y. Full information regarding the meeting and application blanks for membership may be obtained by addressing the secretary, Dr. George C. Johnston, 611 Fulton Building, Pittsburg, Pa.

The consumption of drugs in the war carried on in the Far East is one of importance. Quite early in the war upward of 100,000 ounces of quinine were demanded, and stocks of bismuth subnitrate and sodium salicylate were exhausted. Fifty thousand large cases of medical supplies were shipped from Japan at one time. The demands for adhesive plaster, gauze, cotton, and other surgical dressings were enormous, and supplies difficult to procure. Two million pills a day were supplied by the army's tablet and pill works of Japan. The government of Japan purchased all of the available stock of beechwood creosote, which was made into pills, and each soldier was required to take one a day to prevent dysentery. Each soldier carried a tin containing 90 pills, and they were labeled "Russian Expedition Pills." The government of Japan at one time purchased one hundred thousand pounds each of carbolic acid and corrosive sublimate. These supplies were obtained mainly from Great Britain and the United States. Every item was examined by experts and had to be in accordance with the army pharmacopœia.—*Red Cross Notes.*

The "jungle" has been found in England, France, Japan, and, indeed, in all countries where a search has been made for it, and America, so far from being the worst or only sinner against packing-house hygiene, is now shown merely to have been the first to expose and correct the evil, says the *Medical Record.* One of the latest to investigate home conditions and to find them bad is Prussia. A despatch from Berlin says that the Government Medical Department has issued a report on the sanitary conditions of the Prussian bakeries and slaughter-houses, in which it is set forth that many of the butchering establishments were found to be in a very unclean condition. Some of them were situated in dark cellars, where cleanliness was impossible, and others had no facilities for the employees to wash themselves. The government inspectors found the conditions in the bakeries to be particularly objectionable. In one town boys kneaded the dough with their feet, and one bakery was found to be occupied by cats and hens. In another town a baker's oven served *ad interim* as a goose pen. One baker admitted that his floor and vats were scrubbed only once a year.

On August 24 the New York State Department of Education announced that as a result of the conference between the States of New Jersey, Michigan, and Ohio, formal agreements for reciprocity in medical licensure have been entered into between the States of New York and New Jersey, Michigan and Ohio, during the school year just closed. The basis upon which reciprocity obtains between these States is a license earned on examination in either one of them. The candidate must present credentials from the officials of the State board of medical examiners which licensed him, showing that at the time of such application he is a reputable practitioner. Provision is made for the inspection of the qualifications of an applicant either personally or professionally when there are reasonable doubts of his qualifications. The agreement has been signed by the representatives of the State boards and the education departments and remains in force until rescinded by formal action.

The medical faculty of the University of Vienna will in a short time lose four of its professors in consequence of the old regulations requiring that all professors and clinical teachers shall retire from their posts on reaching the age of seventy years. Of those who are therefore about to relinquish their chairs, Prof. Adam Pollitzer is perhaps the best known. He will take advantage of the "bonification" permitted by the law, which entitles a professor to occupy his chair for one year more, the so-called "honorary year," after his seventieth birthday, and will accordingly during the session 1906-7 continue his celebrated courses on otology, which are conducted in the English language, if a sufficient number of his audience request it. The other teachers on the point of retiring are Prof. Stoffella d'alta Rupe, who does not intend to apply for the honorary year, Professor Winternitz, and Professor Benedikt. Professor Winternitz is the Nestor of modern hydrotherapeutists, and to him belongs much of the credit of having given hydrotherapy the position which it holds among modern means of treatment. Professor Benedikt is well known, even beyond German-speaking medical circles, for his investigations on the brain of mammals, and for his treatise on the diseases of nerves. An original thinker, he has frequently denounced routine methods in the teaching of medicine, and recommended a more individualistic system both in training students and in making appointments to medical posts.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Trigeminal Nevi and Intracranial Hemorrhage.

H. Cushing (*Journal of the American Medical Association,* July 21, 1906) calls attention to a possible connection between congenital birthmarks in the facial region and spontaneous intracranial hemorrhages. Noting the topographical correspondence that often exists between these birthmarks and the distribution of branches of the fifth nerve, he remarks that there is much in favor of Baerensprung's idea that these nevi correspond with lesions occurring in the Gasserian ganglion. He reports three cases of such nevi in which certain complications occurred, due, as he interprets them, to the fact that the cutaneous lesion may be accompanied by a similar condition of vascularity of the dura mater which is sensitized by filaments from the same nerve. In the three children, all of whom were born with vascular nevi corresponding to branches of the fifth nerve, there occurred intracranial hemorrhages and convulsions, and in two of the cases contralateral spastic hemiplegia. In one of the cases which came to post-mortem a notable fact was the smallness of the Gasserian ganglion and a meningeal nevus on the same side as the external one. The same condition of meningeal nevus existed in a second child, who was operated on.

In the review of the literature Cushing has found one report by Strominger of a similar nevoid condition of the meninges leading to hemiplegia, associated with a facial cutaneous nevus in the trigeminal region of the same side. He sums up, in substance, as follows: Vascular nevi of the face have a tendency to correspond with the distribution of one or more main branches of the trigeminus. These cutaneous nevi may be associated with some degree of hypertrophy of the deeper tissues of the face, with an enlargement of the eye, and also with a corresponding nevoid condition of the dura, which may lead to a spontaneous intracranial hemorrhage, with results similar to those of the subdural hemorrhages in infancy from other causes. Absorption of the clot may lead to corticodural adhesions, which in favorable cases, like the second one reported by him, can be separated with benefit as regards the convulsion, etc., provided measures such as carotid ligation are taken to prevent complications from hemorrhage.

The Treatment of Surgical Tuberculosis.

V. W. Low (*Lancet,* July 14, 1906) sums up the treatment of osseous, arthritic, and glandular tuberculosis as follows: (1) In all cases "open-air" treatment should be organized to meet the circumstances and requirements of the particular case. (2) In every case the patient's powers of resistance to the disease should be periodically measured by suitable blood examination. (3) Where the resistance is found low and there is no evidence of an excessive autoinoculation, use should be made of therapeutical inoculations of Koch's new tuberculin in doses that are accurately controlled, both as regards their amount and repetition, by examination of the blood. (4) In cases in which there is evidence of excessive autoinoculation absolute rest with complete fixity of the diseased part should be prescribed. (5) In cases in which it is evident that the diseased area is circumscribed and practically cut off from the circulation of tissue fluids efforts should be made to improve the circulation through the diseased area. The means we have at our disposal are fomentations and the use of certain mild irritants—*e.g.,* liniment of iodine and Scott's dressing, light therapy, general massage, and local massage with carefully regulated movements. (6) Operative procedures should be directed to the removal of the dead, inert material, whether pieces of bone or collections of pus, and should be conducted with the most scrupulous aseptic precautions. By means of modern cystoscopy tubercle of the bladder and kidney may be diagnosticated even before bacilli have appeared in the urine, and constitutional treatment can therefore be adopted at an earlier stage, with consequently greater hope of success. At a later period in the disease the condition of the second kidney in a case of renal tuberculosis can be ascertained with greater accuracy, thus obviating the removal of the less diseased kidney.

Surgery of Tuberculosis of the Colon.

L. L. McArthur (*Medical Record,* Aug. 18, 1906) at the recent meeting of the American Surgical Association read a paper on this subject, in which he submitted the following propositions: (1) Intestinal tuberculosis was far more frequent than had been in the past accepted. (2) Its primary nature in this situation was not admitted to be 5 per cent by the pathologists, who also claimed that 25 per cent of all human tuberculosis gained its entrance through intestinal mucosa. (3) Either the "ulcer-

ative" or the "hypertrophic" type of this disease was (at some time) amenable to surgical interference. (4) Interference should be either by excision or exclusion. (5) Surgical insult in these forms of intestinal disease was better borne than a like degree in any other. (6) Early recognition by the internist and interference by the surgeon would eliminate a large proportion of cases now classified as tabes mesenterica. Tuberculosis manifested itself in the intestine in two forms, the ulcerative and the hypertrophic. Individuals extremely prostrated with this affection were tolerant to extensive surgical insults, which in other ailments requiring similar surgical procedures proved fatal. Both of these varieties in his experience are amenable at times to surgery, the nature of which interference must be determined by the individual case. So many factors take part in its determination that no set rule can be laid down. Practically, its surgery divides itself into either exclusion or excision, the choice being determined by the conditions obtaining in the given case. The exclusion may be partial or total. The term "partial" he applies to a side-to-side anastomosis of the intestinal tube above and below the diseased area, while a "total" exclusion implies a resection of the bowel wall above the disease, closure of the distal end, with implantation of the proximal end well below the diseased area. It is distinctly to be understood that absolute occlusion was never practiced. Though the number of cases of tuberculosis of the large intestine demanding surgical interference in his practice had been limited, the regularity with which they had recovered had made him most hopeful for the future. He presented from his records cases upon which he had operated, illustrating the points he emphasizes in his paper.

Gastric Ulcer and Cancer.

C. Graham (*Boston Medical and Surgical Journal,* Aug. 23, 1906) says that in the first stage of ulcer there is unusually good appetite with nutrition at par or even excessive; pain two or three hours after meals, when the stomach is empty or emptying itself. These patients present themselves to be relieved of pain which they say comes after meals, but which in reality is premeal pain. The second stage may be established some months later, following several intermissions with recurrences, each increasing more or less in severity; appetite good, though perhaps not above normal; less satisfaction follows the hearty meal; pain is severe and comes sooner after food. In the third stage desire for food may remain,

it may be fair or decreasing, but the patient is afraid to eat because of distress, pain, gas, vomiting, sour eructations, bloating or sour burning stomach; there is but short food relief, if any; perhaps obstructive symptoms; loss of flesh usual; and even cachexia may be present. Constipation, marked in all stages, is usually obstinate here. When the undoubted fourth state (cancerous) is reached the whole picture is intensified. The appetite is poor or absent, or even the smell of food may be repulsive. Meats and fats are especially avoided. Emaciation follows rapidly, often more so than can be accounted for by loss of appetite (toxic or perhaps food delay); strength drops from under the patient, languor is intense, and he exerts himself with difficulty; the anemic, cachectic condition develops more and more clearly.

Cases of Hernia in which Loops of Bowel were Strangulated in the Same Sac.

J. H. Pringle (*Edinburgh Medical Journal,* June, 1906) reports a number of cases of this character. He finds the condition one of great importance, the possibilities being as follows: (1) The several loops outside the abdominal cavity may become gangrenous apparently without involvement of the connecting loop, and may result in an artificial anus with multiple lumina. (2) The internal connecting loop or loops may become gangrenous without gangrene of the external herniated loops. (3) The herniated loops, together with the connecting loop or loops, may all become gangrenous. The important point is to determine the state of the connecting loop, which, blocked at both extremities, cannot empty its contents forward or backward, and for this reason, as well as on account of the fermentative changes within its lumen, is liable to have its entire length gangrenous, however favorable the appearance of the herniated loops may be.

Reflex Symptoms and Referred Pains Caused by Stone in the Kidney.

S. S. Bradford (*Medical Record,* Aug. 21, 1906) gives the history of a patient whose principal symptoms were nervous exhaustion and pain and weakness of the lower extremities, movable right kidney, pyuria, retroversion of the uterus, and defective circulation of the lower extremities. No improvement had resulted from change, travel, rest, and various methods of

treatment which she had undergone. The patient was a woman thirty-two years old, a librarian. The family history was negative. The mental condition was excellent. After she was sent to the writer a thorough examination was made in order to detect, if possible, evidences of organic trouble. It was found that while clear amber urine flowed from the right ureter, a thick, whitish fluid came slowly from the left. An *x*-ray picture of the kidney confirmed the diagnosis of stone. Operation proved this diagnosis to be correct. The patient died on the third day after the operation. The writer suggests that the irritation in the kidneys or pancreas or both caused the so-called referred pain of head, and brought about reflexly a spasm of the vasomotor nerves derived from the lumbar and upper sacral segments. This caused contraction of the blood-vessels of the lower extremities. The ischemia in the nerve endings caused the deep-seated pain, and in the muscles the weakness.

Surgical Aspects of Colitis.

P. L. Mummery (*Practitioner,* August, 1906) says that colitis is a symptom rather than a disease. Careful examination with the sigmoidoscope, if possible, should be made, and the cause determined before treatment is adopted. If the colitis is due to disease of the appendix, kidney, gall-bladder, etc., the cause should be removed by operation. If it is secondary to malignant disease in the bowel, an early diagnosis is of the utmost importance, and an early operation offers the only chance of cure. If it is due to a local lesion, like tubercle or actinomycosis, it must be treated locally—by operation if necessary, as by colotomy or enteroanastomosis. Van Noorden's dietary with irrigation of the colon if necessary is the treatment for true mucous colitis. In obstinate cases, especially in ulcerative colitis, a temporary colotomy or enteroanastomosis seems the only method of cure, but should follow palliative treatment.

Operation in Barlow's Disease.

Riese (*Deutsche med. Wochenschrift,* 21, 1906) was called in to operate on a supposed case of osteomyelitis in a male child fourteen months of age. The case was found to be one of infantile scurvy, and the large hemorrhagic extravasations on the leg were so painful that he incised them down to the periosteum, afterward tamponing. The patient experienced immediate relief. The fever subsided, and the wounds rapidly healed.

Paralysis Following Spinal Anesthesia.

Konig and Roder (*Münchener med. Wochenschrift,* 1906) call attention to a number of cases which illustrate the dangers of spinal anesthesia, which may be followed by more or less permanent paralysis. In one case the paralysis occurred from the umbilicus down, and persisted until death three months after the induction of anesthesia.

MEDICINE.

Primary Infection of the Salivary Glands in the Old.

G. Etienne (*British Medical Journal,* July 28, 1906) briefly summarizes the various means which prevent infection of the salivary glands and ducts occurring in a state of health; these are the sweeping away by mastication, deglutition, and the taking of liquids, especially when acidulated or alcoholic, of the numerous microbes occurring in the buccal cavity, and particularly the antiseptic properties which normal saliva possesses. If the acts of mastication and deglutition be diminished or suppressed, such as may occur after gastrostomy or gastroenterostomy, the secretion of saliva is rendered sluggish, stagnation occurs in Steno's duct, and invasion of the orifice of the duct and the infection of the salivary gland by microbes are liable to occur. In acute diseases, such as pneumonia or typhoid, a similar state of things is liable to be present. In old age these modifications of the buccal functions are most marked and readily explain the not uncommon occurrence of inflammation of the salivary glands found in these patients. The involvement of the salivary glands occurs by a spreading up of infection from the orifice of the excretory duct, and is assisted by a previous affection of the gland parenchyma, such as may occur in acute infectious diseases. In old people the salivary glands are found to have undergone certain degenerative changes which render them very liable to infection, spreading from the buccal cavity; in some the gland is found to be invaded by adipose tissue, which cuts up the lobules and surrounds the cul-de-sac, so that the secretory canals appear reduced in size. This invasion of fat begins at the periphery of the lobules, and little by little reduces the whole gland so that it resembles a tree with branches, but deprived of leaves; the excretory canals are much more atrophied than the secretory. In more advanced cases one finds the canals dilated, the cells lining them deeply colored and presenting scarcely any longitudinal striation; they are small,

cubical, crowded together, and with elongated nuclei. The glandular culs-de-sac are very small, and at certain places the canals are dilated to form ampullæ, with very modified cells, possessing no trace of secreting function; around the canals the connective tissue is abundant.

The author finds that acute salivary gland infection is common amongst old people (16 out of 45 cases were in the aged), and in such is much more frequently a primary manifestation than when occurring in younger people. The special frequency with which the parotid salivary gland is affected, the author thinks, is due to the exposed state of Steno's duct, to the parotid secretion being largely dependent upon reflex stimulation from the buccal cavity, and to the fact that the function of this gland is more affected by any interference with mastication and deglutition than is that of the other salivary glands. The sublingual gland is comparatively rarely involved by infection, probably owing to the movements of the tongue in speaking, etc., preventing any stagnation of secretion in its duct.

The Variation in the Fat Percentage of Mother's Milk as a Factor in Feeding.

L. Taylor-Jones (*Archives of Pediatrics,* July, 1906) says the importance of mother's milk cannot be overestimated. A physician should feel that he is taking the baby's life in his hands in lightly changing from breast milk, and should so impress the mother. Besides the immediate danger, which at times is not so great, it lessens the stamina for later years. A right start in anything is essential, but nothing is more important than a right start in life. If there is some disturbance to the nursing infant, the breast milk should be examined, unless some cause like tuberculosis is at once recognized. It is not long since patients were pronounced anemic upon looking at them, but to-day the hemoglobin must be estimated. So must it be with the breast milk. Fat is an important factor, if only for its variability. The importance of the fats has increased lately, since the Breslau investigators gave them such an important rôle in infantile atrophy (marasmus). For the most part fat gradually increases in amount from the beginning to the end of feeding, with occasionally a dip down at the end. As yet there is no proof that the increase is arithmetical. A baby that needs more fat than it is getting can easily be put to the breast after some milk has been

pumped out. A fat percentage within a few tenths of a per cent of the average may be obtained by taking equal specimens from the beginning and end of the feeding and examining the mixture. This is entirely practicable clinically and should be done.

Disseminated Tuberculosis in Relation to the Thoracic Duct and Vascular Tubercles.

G. H. Whipple (*Johns Hopkins Hospital Bulletin,* August, 1906) says that cases of acute miliary tuberculosis usually show a vascular focus from which most of the bacilli are derived, but in the more common subacute cases with a variable number of disseminated tubercles the thoracic duct may be the channel of infection. Small vascular tubercles would seem not to take an active part in the dissemination of bacilli, because during a greater part of their development they are covered by an intact endothelium which, if it ruptures or degenerates, is rapidly coated by a thrombus mass. This either occludes the vessel or is smoothed over, then roofed in by a rapid overgrowth of endothelium. In these cases the bacilli are usually derived from the intestine, which may or may not show ulcers. The organisms in their passage through the lymphatic apparatus give rise to caseation or tubercle formation in the glands, but usually have no effect on the lining of the thoracic duct.

Stigmata of Congenital Tuberculosis.

Sorgo and Stuess (*Wiener klin. Wochenschrift*) from their observations have found that in cases of unilateral tuberculosis the breast on the affected side is the smallest. Out of 111 tubercular females the areolæ were of different sizes in 52, and amongst these the condition was unilateral in 18; in every case the smaller nipple and breast was on the affected side. These observations suggest a connection between the comparative atrophy of one breast and the predisposition of the underlying lung.

Is Neuralgia a Functional Disease?

Alfred Gordon (*New York Medical Journal,* July 21, 1906) says that the occurrence of the peripheral nerve is frequent if not constant in neuralgia; that this nerve degeneration is very probably a primary condition, which as a neuritis assumes an

ascending course and involves secondarily the Gasserian ganglion. Although this contention is still debatable, there is great probability in favor of the above view. The blood-vessels undoubtedly play a certain rôle in the causation of a degenerative state of the peripheral nerve. It is difficult, if not impossible, to draw a sharp distinction between neuritis and neuralgia, as accumulated facts show an anatomical basis in the latter affection. In view of these anatomical facts it is highly important to remove surgically a nerve affected with so-called neuralgia as early as possible after a short trial of medical treatment is given.

Typhoid Nodular Colitis.

G. H. Whipple (*Johns Hopkins Hospital Bulletin,* August, 1906) says that typhoid intestinal lesions limited to the colon are very rare. The term "nodular colitis" should be restricted to such cases as show a marked infiltration of the submucosa with wandering cells, giving rise to prominent isolated nodules having no relation to the solitary follicles, which are comparatively unaffected. These cases are of rare occurrence. The term "lymphatic hyperplasia" may be used to describe the cases showing a simple hyperplasia of the solitary follicles of the intestines, and a relatively normal submucosa. These cases are commonly found at autopsy.

School and Corset.

Lange (*Münchener med. Wochenschrift,* 13, 1906) does not favor bearing all the weight of the clothes on the shoulders, and thinks that young girls need some support for the back. He advocates the use of a corset hung loosely from the shoulders, cut out below the bust and curving upward in front, so as not to cover the stomach region. The idea is the same as in men's clothing: the ends of the corset cross in the back and button on the sides, and the skirts button on the corset. The stockings are suspended from a separate loose belt, bringing the weight on the trochanter, the posterior superior spine, and the symphysis, with the straps in the front of the thigh.

The Causation of Infantile Convulsions.

H. H. Scott (*Practitioner,* August, 1906) says that among the predisposing causes may be mentioned age, heredity, and rickets, as direct causes (1) cerebral irritation, either from disease, traumatism, or shock; (2) reflex disturbances, such as dentition,

gastrointestinal disorders, worms, peripheral nerve irritation, such as earache or spasm of the glottis; (3) less common forms, such as at the onset of acute specific fevers, congenital heart disease, and poisoning from a variety of causes; (4) the fits may be epileptic, or the result of a fright or profound emotion. In most cases more than one of these causes is at work, some underlying condition being present, which renders an attack of convulsions possible on very slight provocation.

The Occurrence of Occult Hemorrhages in Typhoid Fever.

W. Tileston (*Boston Medical and Surgical Journal,* July 21, 1906) says: "Occult hemorrhages may be detected by the guaiac and aloin tests in about twenty-five per cent of all cases of typhoid fever. The application of these tests is of little value as a means of foretelling gross hemorrhages. It is of very little value in diagnosis, owing to the inconstancy and comparatively late appearance of positive reactions. It seems probable that more complicated chemical methods would show a larger percentage of positive results, for the separation of the sloughs must always be attended by some hemorrhage."

THERAPEUTICS.

Marmorek's Tuberculosis Serum.

F. Roever (*British Medical Journal,* July 28, 1906) records his experience of Marmorek's antituberculous serum, which extends over twenty-five clinical cases. After briefly reviewing the method of preparation, the dosage, and methods of application, he states that the cases were all subjected to a thorough and excellent open-air, dietetic treatment, but with the exception of morphine and the acetate of ammonium no other medicament was given. He treated sixteen cases of pulmonary tuberculosis—eleven by subcutaneous injection and five with rectal injection. Of the former four, and of the latter one, did well, while three cases in each class were unaffected, and four cases in the subcutaneous injection class and one in the rectal class did badly. The histories of these cases are given in some detail, and a particular point is made of the immediate effect of the injections; four cases of glandular tuberculosis, one of cutaneous, two of bone tuberculosis, and one each of tuberculosis of the bladder and of the bladder and kidney were also treated. Temperature curves and

weight curves are further appended. In general the injections were well tolerated, and the local reaction varied considerably in the different cases. He gave 452 injections in all, and did not experience a single abscess. He prefers the subcutaneous method, but it has been proposed to apply the serum by the bowel every day, so that a larger quantity of the material may be introduced, it being found that rectal injections do not cause a general reaction.

The author states that from the clinical histories it is by no means clear whether the serum is responsible for the improvements, but he is inclined to regard the improvement in cases of surgical tuberculosis as being produced by the serum. However, from the clinical side alone he would have been guarded in expressing an opinion were it not for a control which he carried out on the condition of the blood of each patient. He points out that Arneth has demonstrated that if one stains the neutrophile leucocytes, and notes the number of cells with one, two, three, four, and more nuclei, one can form a valuable opinion as to the condition of the patient. One should count 100 such cells, and tabulate them according to the number of nuclei. Damaging processes always first attack the cells with four or five nuclei, and only later are those with three nuclei attacked, so that in the much-damaged blood of a severely infected patient one will find a high percentage of cells with one and two nuclei, while in the healthy condition the first class is represented by 5 per cent and the second class by 35 per cent. The cases were subjected to such a blood control, and he finds that the results tally with the clinical course. Next he considers how the blood cells were directly affected by the individual injections. The impressions which he received were in favor of the serum having assisted in the improvement and cure, especially in the cases of surgical tuberculosis, but he thinks it necessary to reserve a final opinion until a large series of cases has been subjected to a minute blood-count. He thinks that it will be necessary to give the serum in larger quantities, and to continue it for a longer time, if one is to obtain the maximum effect.

Hot Weather Feeding of Infants.

G. R. Pisek (*Journal of the American Medical Association*, Aug. 11, 1906) calls attention to the importance of the proper excretion of heat to infant health, and how it is affected by diet, atmospheric humidity, etc. The temperature of the air, therefore,

is not a safe guide to follow in judging summer conditions and the causes of digestive disturbances in infants. The need of care to prevent food infection still further complicating the conditions is also pointed out. He sums up his conclusions, in substance, as follows: (1) In warm weather keep a light woolen garment over the abdomen to prevent sudden chilling and retention of heat by suppression of perspiration. (2) Bathe the child twice daily to remove salts and fats on the skin that are left by the sweat and tend to retard the evaporation and to embarrass the excretion of heat. (3) Give plenty of cool boiled water to drink, thus replacing that lost by perspiration. (4) Pasteurize food of all well infants to retard decomposition. (5) In close or muggy weather, or if the humidity is high, dilute the food to one-half with boiled water. In very mild weather, with high temperature, stop milk and feed with gruels till the humid spell is over. (6) On warm, humid nights stop milk feeding, as the humidity is greater at night, though the temperature may be lower; feed gruels or whey, which produce little heat. (7) For diarrhea, give castor oil or calomel to eliminate decomposing food. Stop milk feeding temporarily. If the air is hot but dry, milk may be resumed. With high humidity feed gruels or whey to starve out putrefactive bacteria, and get back to milk very cautiously. (8) Keep up a good air circulation, as stagnant air soon becomes saturated, and no more perspiration can evaporate and absorb heat.

Treatment of Tuberculosis.

B. M. Randolph (*New York Medical Journal,* Sept. 1, 1906) says that every method of treatment of pulmonary tuberculosis which has stood the test has had for its prime object the improvement of nutrition. We cannot become narrow advocates of any one remedy, system, or method, but owe it to our patients to employ every available means that will lead to improved nutrition. We must take into consideration every circumstance connected with each individual patient, and modify our remedies, both in their selection and application, according to the needs of the case. Treat the patient, and the patient will take care of the disease.

DERMATOLOGY, SYPHILIS, AND RAY THERAPY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Member of the American Dermatological Association and of the American Roentgen Ray Society.

Senile Warts and Epitheliomata Originating From Them.

L. Walsh (*British Journal of Dermatology,* July, 1906) says that this condition of the skin—which has received a variety of names, such as "seborrheic warts" and "senile hyperplastic sebaceous gland tumors"—has been more or less carefully described by a large number of writers, such as Neumann, Barthelemy, Pollitzer, Unna, Brocq, Jarisch, and Dubreuilh. In these descriptions there is considerable diversity of opinion, both with regard to the typical histological architecture of the lesions and their true place in the list of skin affections. With a view of assisting in the solution of these problems the writer has studied eleven cases, which occurred not only in old people, but also occasionally in early life. It has been suggested that these lesions should be placed under the category of soft nevi, but this was not borne out in Waelsch's sections. The initial stage of the senile wart is an inflammatory condition of the underlying corium, the inflammation being most marked in the neighborhood of the hair follicles and sebaceous glands, and is seborrheic in nature. The name "senile wart" is unfortunate, as it is not in the true sense of the word a wart, but only a condition of acanthosis associated with the underlying inflammation, and is not necessarily senile, as it may occur in young individuals in association with other seborrheic indications. Instead of "senile wart" the author suggests the name of "acanthosis verrucosa seborrheica." He considers that the malignant growth which not infrequently results from these lesions is caused by some unknown irritant acting on the altered epithelium.

A Case of Urticaria Pigmentosa.

A. Engel (*Archives of Pediatrics,* July, 1906) reports the following case: The entire face and body of an eight-days-old, breast-fed baby was covered with a maculopapular exanthem. The efflorescences, the size of peas, had a dark-red color and were somewhat infiltrated. The surrounding tissue was apparently not affected. The author says the plaques resemble urticaria,

are congenital, non-itching, and the color changes late to a brown pigmentation. New efflorescences appear from time to time, but there is no special vasomotor irritation evident. Anatomically the stratum of the plaques consists of a dense accumulation of fat cells which are located in the dilated corpus papillare and infiltrate the cutis later on. Melanotic pigment may be found in the basal epithelial cells. There is no specific treatment. The prognosis is favorable, but the plaques may not disappear for years.

Pirogoff's Camphor Treatment for Erysipelas.

D. Mayer in a brief note to the *British Journal of Dermatology* for July, 1906, protests against a statement appearing in a former number to the effect that we do not possess a reliable method for influencing erysipelas. The writer has used Pirogoff's method for sixteen years, and thoroughly believes in it. Pirogoff recommended that doses of 0.15 gr. of camphor should be given every hour, or every two hours, and that the patient should be made to sweat freely by the administration of hot tea. The usual methods of external treatment are also employed.

GYNECOLOGY AND OBSTETRICS.

Causes of Sterility.

G. G. Ward (*American Journal of Obstetrics,* August, 1906) has drawn the following conclusions: (1) As conception is dependent upon healthy spermatozoa, normal ova, the union of the same, and the proper implantation of the fertilized egg, so sterility is most frequently dependent upon acquired lesions and congenital defects which cause sterility by interference with these essentials. (2) Many cases of acquired sterility are due to lesions which cause such changes in tubes and ovaries as to prevent the union of spermatozoa and ova. (3) Gonorrhea is the most frequent cause of such lesions. (4) Acquired sterility in many cases is due to endometritis, which causes such changes in the endometrium as to prevent the proper implantation of the impregnated ovum. (5) Sterility associated with flexions, displacements, subinvolution, fibroids, and other neoplasms is caused by the accompanying chronic endometritis, which prevents proper implantation. (6) A cause of unhealthy endometrium and of tubal disease which may prevent union of the male and female

elements is the chronic inflammation and congestion of the uterus and adnexa incident to subinvolution or sepsis. (7) Gonorrhea not only causes sterility in women in seventy per cent of cases, but is also the cause of sterility in the male. (8) In two-thirds of all cases of gonorrhea in women, the woman has been infected by the man.

Syncytioma Malignum.

J. T. Henetson (*Practitioner,* August, 1906) says that metrorrhagia following abortion or labor should call for more prompt investigation, especially in women under thirty. Dilatation and curetting, under such circumstances, is an operation of considerable responsibility, in view of the possibility of malignant disease. Sharp curettes are contraindicated in the parturient uterus, and in the presence of septic infection. All such curettings should be submitted to an expert pathologist for microscopical examination. Continued metrorrhagia after such treatment should be regarded as of serious import, and should call for fresh investigation and prompt radical measures.

The Use of the Pessary.

H. A. Slocum (*New York Medical Journal,* Sept. 1, 1906) says that whatever opinions may be held by the opponents of the pessary, it is an established fact that too large a proportion of cases treated with it secure a symptomatic or positive cure to allow an unprejudiced mind, possessed of these data, to doubt that the pessary has its own proper place in the armamentarium of the gynecologist, and holds a field of usefulness and even importance in the treatment of retrodisplacements of the uterus.

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ORIGINAL CONTRIBUTIONS.

THE PRESENT STATUS OF SURGERY OF THE HYPERTROPHIED PROSTATE.*

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In presenting this subject to you to-day, it is not my intention to give you the results of my experience—it has been too limited—nor yet to advance any new theories or new methods in technique, but to review, however imperfectly, what has been accomplished by others, working in a larger field, and to endeavor to show you what we can offer to-day in the mitigation and cure of a class of cases which only a few years ago were as hopeless as any with which we were called upon to deal. We must acknowledge at the outset that we have been a little slow here in Rhode Island in appreciating and extending to our patients the benefits of the grand work which has been developing elsewhere.

While modern prostatic surgery is the growth of the last few years, a beginning was made almost three-quarters of a century ago.

Prostatic hypertrophy was at first regarded as "an excrescence of the neck of the bladder," and was accordingly attacked through the natural passage. Leroy d'Etiolles first proposed incision and scarification of the prostate through the urethra in 1832, and in his work we see the germ of the Bottini operation of the present day. He was closely followed by Guthrie, who devised instruments for snaring the projecting middle lobe.

Mercier, in 1837, devised an instrument somewhat like our urethrotomes. In 1856 he exhibited a galvanocautery instrument resembling the Bottini. This was further improved in 1877, but was not used to any extent until it was taken up by Freudenberg in 1897. Since that date it has had ardent advo-

*Read before the Rhode Island Medical Society.

cates, and much of the work of perfecting instruments and technique has been done in this country by Hugh Young, Guitéras, and others. One great objection to its use was found in the fact that the operator worked entirely in the dark. To obviate this, Tenney, in 1904, added an endoscopic attachment which enabled the surgeon to see what was being done within the bladder.

Lateral lithotomy for the removal of stone from the bladder is one of the most ancient operations, and in connection with it polypoid growths were occasionally twisted off. Hence it was natural that attention should at first have been directed to this route. To Guthrie belongs the credit of first advising and practicing a method of treatment by incising "the bar at the neck of the bladder." Others attempted tunneling the prostate and draining the bladder, using sometimes sharp instruments, like a large trocar, sometimes various modifications of the galvanocautery. All of these procedures were abandoned as dangerous and futile.

Gouley, as has been so often pointed out by Watson, was the true pioneer of modern prostatic surgery, for he, in 1873, first operated for the removal of the entire prostate. He elaborated his method and taught it to others, among them Watson, by whom it was kept alive; but it failed of proper recognition by surgeons at large, and was not appreciated at its full value until the flood-tide of prostatic surgery brought it into prominence.

From 1890 to the present time a long list of operators have followed in his footsteps, working in various ways and with varying technique, devising new instruments and perfecting the operation, until we have, as the result, modern, scientific perineal prostatectomy, based on anatomical grounds and thoroughly systematized.

The first recorded operation for hypertrophied prostate by the suprapubic route was by Ammusat, in 1827, who removed the middle lobe with scissors. McGill did much to establish this method in England. Fuller and Guitéras have developed and improved the technique.

Castration, first proposed very cautiously by White in 1893, vasectomy, ligation of the internal iliac, and a number of other procedures have either been entirely discarded, owing to their futility and inherent dangers, or are rapidly becoming only historically interesting. (For many of the points in this brief historical review I am indebted to Dr. Ballenger's admirable article in the *Medical Record* of February 4, 1905.)

While, then, scattered surgeons, seldom collaborating and

frequently ignorant of each other's results, had broken ground, but little practical work had been done up to fifteen years ago, and we had little or nothing that was new to offer unfortunate sufferers from prostatic troubles. The reader recalls reporting and discussing a case before this society at about that time, which ran the usual course from bad to worse and terminated in cystitis, pyelonephritis, uremia, and death. The most advanced surgical procedure practiced by me in that case was aspiration of the bladder after the breakdown in catheter life, nor did the discussion by the Fellows elicit any reference to more radical procedures.

Since that time progress has been rapid and steady. It has not always been along logical lines, and much of the work done has since been discarded or discounted, but the surgeon has learned as much, maybe, from the failures as from the successes, and prostatic surgery is to-day as firmly established and as constantly practiced as any branch of the art. The literature, theoretical, explanatory, controversial, is voluminous in the extreme, rivaling if not equaling in volume that concerning appendicitis during the same period.

It is not necessary to follow the discussion in regard to etiology. Many theories have been advanced, all as yet insusceptible of proof. The most rational is that which attributes the hypertrophy to "glandular overgrowth," influenced by the degenerative changes of old age and other agents which tend to produce the formation of fibrous connective tissue in an actively functionating gland. There is no reason whatever for believing that gonorrhea is a prominent factor in its causation.

Frequency of micturition, especially at night, difficulty in beginning the act, loss of force during its performance, and dribbling at the end, are early symptoms. Sooner or later retention, due to some accident or indiscretion, with resulting overdistention of the bladder, leads to frequent diurnal urination and inability to completely empty the viscus. Changes in the shape of the bladder as the result of the obstructing gland take place, so that the urethral orifice is no longer at the most dependent point, and a pool of residual urine constantly remains, which cannot be voluntarily expelled. Infection of the bladder as the result of catheterization or retention of residual urine follows and further aggravates the symptoms. After a variable time, in most cases, palliation fails, the kidneys become infected, and uremia follows, if the patient does not first succumb to cystitis and exhaustion. The bladder becomes distended, sacculated, or

pouched, and often loses its tone entirely. The mucous membrane is frequently thickened and inflamed, the urine decomposes, and the residuum contains an abundance of earthy phosphates and other salts which greatly increase the tendency to stone formation. Frequent catheterization, rendered necessary by the irritating nature of the urinary constituents, often leads to a contracted bladder.

The changes in the prostate itself may be general, due to a hypertrophy of the whole gland, or partial, affecting one or more lobes. This overgrowth may be entirely outside of the bladder, or it may result in projecting, more or less pedunculated, masses within the viscus.

Two general forms of prostatic hypertrophy are recognized —the large, soft prostate, in which glandular overgrowth predominates, and the smaller, dense, fibrous prostate, due to a great increase in connective tissue elements. There is no ground for believing that the second is a later stage of the first. The enlargement may be unilateral, affecting a single lobe; bilateral, involving both; or it may involve particularly the middle lobe, which frequently projects into the bladder, forming a valve-like obstruction over the urethral orifice. As a result of these changes in the gland the urethra becomes more or less elongated, tortuous, and often flattened, so that the passage of the catheter becomes difficult. The catheter, to pass safely, must be made to hug the floor of the urethra.

The physical condition of the patient becomes pitiable in the extreme. Broken sleep, pain, loss of appetite, sepsis, combine to depress him physically and mentally, until life becomes a burden almost too great to be borne. This brings us to a consideration of the question, What can we do for his relief?

In early cases, where the symptoms are mild or absent, catheterization is easy, and there is no residual urine, it may be allowable to temporize, but it is precisely in this class of cases, as I shall show later, that operation gives the most brilliant results with the least risk, and it should be resorted to on the first indication of increasing trouble.

Medication is of little value. Belladonna, hyoscyamus, bromide, and urinary antiseptics may accomplish something and should certainly be used in the early stages as adjuvants.

Dilatation of the urethra and the relief of possible strictures by the passage of full-sized sounds at frequent intervals may keep the urethra open and postpone the impending breakdown, but it is doubtful, to say the least, whether they exert any influ-

ence, as was once thought, to produce atrophy in the parts immediately about the urethra. Still they have a place, though a small one, in the treatment.

The catheter, if used continuously at all, should be resorted to on the first appearance of an appreciable quantity of residual urine. How far and in what subjects it should be used is a difficult and important question.

If the patient is intelligent, well-to-do, and so situated that he can be always under the care of a competent physician, the catheter may render life comparatively easy and postpone for a long time or altogether the necessity for surgical intervention. Its use calls for unremitting watchfulness and attention to strict asepsis. In elderly, feeble patients in whom prostatic disease has developed late in life, it may serve to the end. In the unintelligent, poorer class of patients, unable to avail themselves constantly of professional advice, it becomes an added source of danger and tends to aggravate rather than mitigate the symptoms. Exceptionally its use has been continued for many years, that particular urethra seeming to have an unusual tolerance of germs and immunity from infection. I recall clearly the case of a man in a neighboring town, who depended upon the catheter entirely for eighteen years. He was accustomed after using it to coil it up, wrap it in a dirty brown paper, and place it in the same pocket which held his quid of tobacco when temporarily out of use. Such instances must be rare.

In early cases in which catheter life has not begun, occasional attacks of acute retention may occur, through too long retention, intemperance, and other causes, and may furnish the first warning of impending trouble. Catheterization under these circumstances calls for the greatest skill and care. A soft instrument is preferable, if it can be introduced, and no other should ever be trusted to inexperienced hands; but if its introduction proves difficult or impossible, the skilled operator prefers a silver instrument with the long prostatic curve and a second curve in the shaft. In certain cases, evidently those with enlargements of the lateral lobes pressing on the urethra, the flat prostatic catheters introduced two or three years ago are frequently useful.

Force should never be used, lest to the existing condition we add traumatism of the urethra or puncture of the prostate, with greatly increased danger of sepsis.

If the bladder cannot be entered without force, it is far better to employ suprapubic puncture with the aspirator and follow

this by palliative treatment, when voluntary micturition usually again becomes possible.

In the majority of those who have entered upon catheter life a "breakdown" comes sooner or later, when increasing pain and tenderness, frequent hemorrhages, constant desire to empty the bladder, with the exhaustion consequent upon sepsis and loss of sleep, render life no longer tolerable.

Usually under these conditions the kidneys are already compromised by the backing up of the urine and the extension of sepsis. Generally by this time the patient is reduced to a condition which precludes other operation than one of imperative necessity. Formerly no adequate aid could be offered these unfortunates, and they were to be congratulated if the end came quickly.

While advocating early operation, it is my object to show you that even these cases are no longer hopeless if a competent surgeon is at hand.

In 1893 Dr. J. William White, of Philadelphia, read an exhaustive paper upon this subject, and suggested, following the analogy between prostatic hypertrophy and uterine fibromyomata, the possibility of reduction in the size of the gland following castration, just as the uterine growths were known to be influenced by removal of the ovaries. The suggestion, somewhat cautiously made, was seized upon by a host of surgeons, and castrations reported soon mounted high in the hundreds. White had alluded to it as an operation which was easy of performance, and should be almost free from danger. It was found, however, to yield a comparatively high rate of mortality. Taking the whole series of 111 cases reported in White's article two years later, the death-rate was 18 per cent. After excluding, for various reasons, 13 of the fatal cases, he still found, "in cases operated on with a reasonable expectation of cure," a mortality of 7.1 per cent.

Still the results obtained had been brilliant in some cases, and more or less satisfactory in many others, the number improved or cured being about 71 per cent. This improvement had been shown by shrinkage and diminution in the size of the gland, shortening of the urethra, disappearance or improvement of preexisting cystitis, recovery of "tone" in the bladder, and better general condition.

We find Dr. White and other operators now enthusiastically advocating the operation and taking up the cudgels vigorously in its defense. Cabot, in reviewing the results obtained up to 1896,

says: "We shall be able to express the facts thus to our inquiring patients: 'You have eight chances in ten of getting through the operation all right, and if you are successful in this you have again eight chances in ten, or a little better, of getting very substantial relief from your urinary difficulties.'" The operation was, of course, open to the sentimental objection of taking away all sexual appetite and power, and in a certain proportion of cases was found to be followed by mental troubles.

Vasectomy and ligation of the vas proved even more uncertain in their results.

These operations may be said to have reached the height of their popularity about 1896, since which date they have gradually declined and are now rarely undertaken. Their mortality was high, results uncertain and not always permanent.

While many operators were carried away by their zeal for castration, a comparatively smaller number were practicing the Bottini operation, which consisted essentially in burning, by means of the galvanocautery introduced through the urethra, a groove or channel through the obstructing glandular tissue of the middle lobe and secondary smaller grooves in one or both lateral lobes, with the intention of (1) removing the bar to the easy passage of the urine from the bladder; and (2) by means of cauterization and destruction of tissue influencing a consequent atrophy and shrinkage of the gland.

The results were good in many cases, and the operation had the great advantage of being done without general anesthesia; but it was open to the following objections:

1. It had to be done in the dark, the finger in the rectum being, during the operation, the only guide to the extent and location of the obstruction. The cystoscope, even when it can be introduced, which is not always possible, so modifies the relations in its passage as to give no trustworthy information.

2. It required special delicate instruments and a knowledge of electrical currents which is not commonly found in the general surgeon.

3. It was impossible to be certain as to the location of the beak of the instrument and the tissues in the grasp of the cautery.

4. Lack of certainty in diagnosis made it impossible to gauge accurately the proper length of the incision.

5. Uncertainty as to the temperature of the blade, it being found difficult to maintain the necessary white heat without injury to adjacent structures.

6. Uncertainty as to the destruction of tissue; and

7. The danger of bending the blade.

Owing to several of these limitations, serious and fatal accidents or failure in results were liable to occur.

These points, summarized essentially as above by Bouffleur (*Annals of Surgery,* July, 1902), together with its applicability to pedunculated middle lobes and also to cases of stricture or elongated and tortuous urethra, and the fact that it does not allow of treatment of coexisting conditions, such as calculus, led him to condemn it as unsurgical and propose as a substitute cauterization of the prostate through a suprapubic incision.

This method was free from most of the objections stated above, and was employed by him successfully in several cases. The suprapubic wound was either closed at once, a catheter being introduced in the urethra, or left open for drainage, if cystitis required.

That the Bottini has produced many cases of relief and cure cannot be doubted, but owing to its uncertainty and inherent difficulties it was never widely adopted.

The importance of Dr. Bouffleur's modification was largely negatived by the rapid strides then being made in the safe performance of more radical measures. As it necessitates a general anesthetic and is attended by more or less shock, it is hard to see what advantage it has over suprapubic prostatectomy.

The Bottini operation under cocaine anesthesia in selected cases would still seem to have a limited field of its own, but even this is becoming more and more restricted by the constant lowering of mortality and improvement of results of total enucleation.

From the first two routes for reaching the prostate were advocated, and each had its warm partisans.

Belfield (1886), and McGill of Leeds (1887), in England, were the pioneers of the suprapubic route, but they limited their operations to the middle lobe or protruding portions of the gland, and made no effort to preserve either the prostatic urethra or the ejaculatory ducts.

The credit for introducing the operation of total enucleation belongs to Fuller, who in 1895 opened the bladder from above, cut through the capsule with blunt scissors, enucleated the entire gland with the finger, counter-pressure being made with the closed fist upon the perineum, and completed his operation by perineal section for the purpose of drainage, and hot water irrigation to control hemorrhage and wash out the bladder. He employed temporary suprapubic drainage.

Guitéras, in 1890, modified Fuller's method by using counter-

pressure by two fingers introduced into the rectum. Both aimed at the preservation of the urethra and ejaculatory ducts unimpaired.

Freyer, in 1900, borrowed Fuller's method with Guitéras's modification and announced it as his own, thereby drawing down a stream of criticism from both sides of the water, which would have been still more severe had the profession then known that Mr. Freyer had been given the points of technique personally by Dr. Guitéras.* His only modifications consisted in substituting the nail of the operator for the blunt scissors in opening the capsule, and in omitting perineal drainage as a preliminary step in the after-treatment.

In many of the earlier suprapubic operations no attempt was made to save the prostatic urethra, nor does this seem, from the series of cases reported, to have made much, if any, difference in the length of time of restoration of the bladder function, nor, further, does it seem to have been followed by stricture. It must, however, have been accompanied by destruction of the ejaculatory ducts and consequent impotence. Many early operators, and some of the present day, have assumed that this condition—*i.e.*, impotence—necessarily existed prior to operation in most of the cases, and hence loss of the ducts was of little moment. A very superficial study of the statistics of operated cases will show the falsity of this assumption. Moreover, success in the preservation of this function and the assurances we may thereby give to incipient cases of prostatic hypertrophy will be large factors in inducing them to consent to early operation. While a host of good operators have worked in the suprapubic field, probably no one has equaled Fuller's record, as to numbers at least.

The statistics of his cases for the last few years show a mortality under four per cent in well-to-do patients, and one and one-half to two and one-half per cent higher among charity cases. He says (*Annals of Surgery*, April, 1905, p. 532): "My results are so nearly uniformly satisfactory and perfect that it is my custom to assure a patient that, after recovering from the operation, he will be able to urinate naturally and at normal intervals will be able to empty his bladder completely, and that his urine will become free from pus and bacteria." As to the patient's sexual state, after alluding briefly to the causes of sterility and impotence he concludes: "If a patient still has sexual force before operation, in my experience prostatectomy ought not to injure the function, while in many cases it ought to improve it."

*Annals of Surgery, April 15, 1905, p. 520, *et seq.*

The great advantages of this route are:

1. It can be done with a minimum of time and shock.

2. It allows of positive visual knowledge of existing conditions, and this obviates the use of the cystoscope.

3. It enables us to remove calculi, treat ulcerations, etc., with ease.

4. It is especially applicable to large and pedunculated middle lobes.

On the other hand:

1. It has been attended by considerable mortality.

2. Permanent fistulæ have resulted in a certain percentage of cases.

3. Infiltration and infection of the underlying fasciæ have occurred.

It should sometimes be done in two stages, the first consisting of suprapubic incision and drainage where the condition of the patient's bladder and kidneys is too precarious to admit of immediate operation. Drainage after the operation should seldom be prolonged over three or four days, lest a permanent fistula result. It can often be dispensed with inside of forty-eight hours. Complete failure to regain control in patients who have recovered has been very rare.

Pulmonary complications follow in a small percentage of cases of suprapubic operation. They can be best avoided by getting the patient out of bed as early as possible.

As it is seldom necessary to pass sounds, epididymitis is an infrequent complication.

Gouley's method consisted in an enucleation of the gland through a perineal urethrotomy incision, the finger of the operator doing the whole work. It required but a short time for its performance, caused but little shock, and was almost free from pulmonary complications. It was, however, open to the objection of being done wholly by touch, the finger being relied upon as the only safeguard to the other structures in that region. Injury to the rectum, with resulting fistula, was not uncommon. This operation is still practiced by Watson, Goodfellow, and others, and with their special skill and experience yields excellent results. It has been characterized by Dr. Young as "a blind procedure done in the dark, and a rough tearing out of the gland which disregarded injury to the ducts." Watson and Goodfellow have both shown that virility is often preserved after the operation, but it is a fair question, even while recognizing their

great skill and experience, whether this is not due as much to good luck as to good management.

It is largely owing to the good work of Dr. H. H. Young, of Baltimore, that prostatic surgery has attained its present position. Having tried castration, the Bottini, suprapubic prostatectomy, and the Gouley method in turn, he, like others, felt the necessity for placing the operation upon a good sound anatomical basis, so that the various steps in the technique could be performed systematically under the eye of the surgeon, thus making it possible to save the ejaculatory ducts and the membranous urethra, at the same time minimizing the risk of injury to the rectum.

Using the inverted-V incision and dividing the central tendon and recto-urethralis muscle, he was enabled, with wide, flat retractors, to thoroughly expose the whole field, the rectum being easily drawn back out of the way of injury.* The urethra is next carefully opened and the edges steadied by a silk suture on each side, while a full-sized sound is passed into the bladder through the wound, thus preparing the way for the introduction of Young's two-bladed tractor, which at once brings the posterior surface of the prostate clearly into view. From this time to the end of the operation every stage is directly under the eye of the operator if he succeeds in avoiding or controlling hemorrhage into the field. Without going into the technique in detail, it is important to call attention to several points.

1. By attacking the prostate through two divergent incisions a half-inch or more apart, it is possible to remove both lateral lobes by enucleation without injuring the ejaculatory ducts and floor of the urethra.

2. It is possible to remove even large middle lobes through the same incisions, the blade of the tractor or an index-finger being used to cause the median enlargement to be extruded into one lateral cavity. The enucleation should be accomplished with the blunt dissector or a pair of closed, blunt, curved scissors. By keeping within the capsule and close to the gland there is less danger of wounding the prostatic plexus with resulting troublesome hemorrhage. One practical point in technique I do not remember to have seen in print, viz., at the apex of each lobe in front the adhesions to the capsule will be found so strong as to require to be divided with the scissors.

3. If a calculus is detected in the bladder it can be re-

**Journal of the American Medical Association,* Feb. 4, 1905, p. 337.

moved through the perineal wound without destroying the ejaculatory bridge. Young accomplishes this by splitting the urethra with the scissors along the left margin from the urethrotomy wound to the neck of the bladder, thus laying it open into the cavity caused by the removal of the left lateral lobe. This gives abundant room for all but the largest stones. To extract these without injury to other structures it may be necessary to divide the neck of the bladder with a probe-pointed bistoury. It is not necessary to suture the urethra after the removal of a calculus by this method, the usual after-treatment being sufficient. At the conclusion of the operation it is well to bring together the edges of the levator ani muscle with a gut suture, in order to further protect the rectum.

Following Young we are accustomed to use a double drain of two catheters bound together and introduced into the bladder through the urethrotomy wound, while the lateral cavities are packed with iodoform gauze.

Abundance of water should be given in order to thoroughly flush the kidneys. Continuous irrigation with boric solution or saline through the double drain should be used for the first twenty-four hours or more. I have twice seen extensive extravasation of the tissues of the perineum, scrotum, and thighs as the result of the tubes becoming obstructed, but in neither case did it cause more than temporary annoyance. The gauze should be removed on the second day, the tube on the third or fourth, to permit early closure of the perineal wound. The patient should be up in the wheel-chair by the third or fourth day.

Instrumentation either with catheter or sounds is likely to cause epididymitis, as happened to a patient of mine in September.

The existence of stricture in the urethra led to the passage of sounds, and this was followed by mild epididymitis, first on one side, then on the other. Another cause of epididymitis is found in the destruction of the ducts, leaving the torn ends lying open in the granulating cavity.

In a considerable percentage of Young's cases the perineal fistula closed in from six to ten days.

Having dwelt thus upon Young's operation, we cannot do better than summarize his own conclusions, which serve better than anything else can to commend the operation.*

1. The ages of the 75 patients operated upon up to April,

**Annals of Surgery*, April, 1905, p. 553, *et seq.*

1905, more than one-third being over seventy and about five per cent being over eighty, together with the absence of any deaths directly attributable to the operation itself, show it to be essentially benign and warrant its wider employment. All four of the fatal cases reacted well from the operation, and no death occurred under fourteen days. They were due to uremia, pulmonary embolism, double pyohydronephrosis, and double pneumonia respectively.

2. Restoration of voluntary micturition with absence of residual urine in almost all cases.

3. Continence of urine in all but one case, in which some diurnal incontinence still remains.

4. Preservation of sexual powers in a large proportion of cases as against almost constant loss of potency reported by those who make no attempt at conservation of the ejaculatory ducts.

5. Healing of fistula within two weeks in most cases. Persistent fistula in only two cases, one of which is carcinomatous.

6. No case of recto-urethral fistula since the suture of the levator ani has been practiced.

Dr. Young has used spinal cocainization in at least ten cases successfully, and calls attention to the fact that complete anesthesia for the perineal operation can be obtained in that way. This is not true of the suprapubic route. It should be noted also that spinal cocainization as practiced by him seems so far to be free from dangers of its own.

Tinker* advocates perineal prostatectomy under local anesthesia as being far safer than under spinal cocainization. He employs a weak solution of B-eucaine with the addition of adrenalin chloride.

There is much truth and a wholesome suggestion in Squier's remark: "The choice of anesthetics is of but small moment compared with the choice of an anesthetist."

It is an open question whether the cystoscope should be used in the preliminary treatment. It is impossible in some cases, very unsatisfactory in others, and an added source of danger in still others.

In suitable selected cases its use may be of the greatest value. It is our opinion that it should be restricted to cases evidently suitable, or in which suspected calculus or other condition renders it advisable.

*Journal of the American Medical Association, Feb. 11, 1905, p. 471.

It has been shown that good results can be obtained by a number of methods, much depending upon the skill of the operator. We must not therefore conclude that the choice of a method is a matter of indifference, a question of chance or prejudice.* The operation is one to be undertaken seriously, and should never be attempted by those without special surgical training. It must inevitably, however, in the future be done by the general surgeon in the majority of cases, and can no longer be limited to those who have cultivated special skill and dexterity in its performance. It becomes necessary, therefore, to select that operation which, in any given case, presents the least difficulty, entails the least danger to life, and offers the most in promptness and certainty of cure as measured by a return to relatively normal condition.

Conservative perineal prostatectomy undoubtedly fulfils these conditions more closely than any other operation in the majority of cases, since it offers (1) a lower mortality; (2) a shorter period in bed; (3) more complete approach to normal functions; (4) greater certainty of virility.

The technique of Young is unquestionably the best offered us thus far.

On the other hand, suprapubic prostatectomy should be the operation of choice in a minority of cases in which the prostatic hypertrophy shows itself in a large, pedunculated, intravesical middle lobe, or in which this condition coexists with stone, as shown by the cystoscope.

The Bottini is still applicable to cases which decline operation or cannot stand general anesthesia, but its field of usefulness is deservedly small.

It has been my hope in presenting this subject for discussion today to make it clear to you all that the surgery of the hypertrophied prostate has reached a point of development where it is no longer *sub judice;* that it is your duty to lay before every patient suffering from this cause the possibility of relief at the hands of the surgeon, and to impress upon him unceasingly the fact that in early operation, as soon as the condition has unmistakably declared itself and while the general health is still unimpaired, is to be found the surest road to health and happiness, and an escape from that nightmare, often worse than death itself, the catheter life.

*Pitcher: *Annals of Surgery,* April, 1905, p. 565.

CREOSOTE, WITH SPECIAL REFERENCE TO ITS USE AS AN INTESTINAL ANTISEPTIC.*

BY C. SKINNER, M.D., LOUISVILLE, KENTUCKY.

The paper on uses and abuses of arsenic read before a recent meeting of this society provoked such extensive comment and the expression of such a divergence of opinion that the writer thought it might not be uninteresting to suggest for consideration another drug in more or less common use, viz., creosote, or carbolic acid—practically one and the same substance.

Potter describes carbolic acid as a phenyl alcohol (crystalline powder) derived from distillation of coal tar; creosote as a phenol mixture (an oily fluid) composed largely of guaiacol and cresol; and states that both have the same physiological effects and therapeutic indications, but because of their unpleasant taste being disagreeable for administration by the mouth.

Carbolic acid is employed almost exclusively as a local application, whereas creosote (and its so-called tasteless compounds) is utilized for internal administration. The dosage of each is the same, viz., one to five minims given in watery solution, in capsules with olive or cod-liver oil, or in the form of tablet triturates.

Because of the unpleasant taste of creosote and the danger of producing gastric irritation when given in large doses, it should never be administered except in minute quantities well covered, and preferably after meals. There are several unofficial compounds on the market which have the virtue of being practically tasteless as well as non-irritating to the gastric mucosa; for example:

1. Guaiacol, a liquid; dose, one to five minims.
2. Guaiacol carbonate, a powder; dose, three to five grains.
3. Duotal.
4. Creosote carbonate, a liquid; dose, three to five minims.
5. Creosotal.
6. Benzosol, a powder; dose, five to fifteen grains.

The writer is partial to the last mentioned preparation, and uses it frequently in certain classes of cases.

The alimentary canal from orifice to orifice is conceded to be the richest microbic field extant either within or upon the human

*This original paper was read before the Louisville Medico-Chirurgical Society and published in abstract form in the *Mississippi Medical Record*. The comments thereon have not heretofore appeared in print.—C. C. M.

body—*e.g.*, note the dread of the surgeon of intestinal perforation in penetrating wounds of the cavity in all emergency cases, and even accidental wounding of the intestine in abdominal sections! Where can be found a more rapid pyogenesis than in some forms of appendicitis, producing pus, perforation, peritonitis, and death within thirty-six hours?

With these bacteriologically demonstrated facts, who can wonder at the vast number of dyspeptics with their flatulent bellies, sympathetic heart diseases, blind headaches, vertigo, foul tongues, and loss of flesh? The wonder is how can any man escape!

Nature is capable of doing many wonderful things for protection and preservation of the human economy against bacterial poisons, but there are times when she seems to be overpowered and it becomes necessary to render assistance. Under such circumstances, when the intestinal tract appears to be at fault, it is the writer's opinion that there is nothing superior to small doses of creosote diluted with some bland oil and given in capsules, in watery solution, or tablet triturate. Small doses are efficient, and the drug should be continued for a considerable time.

While the taste of creosote is at first extremely disagreeable, it soon becomes markedly less so; indeed, some patients after a time profess not to dislike the taste of it. When given in small doses and in the manner described, there is little danger of producing gastric irritation.

A favorite combination, and one which meets all the indications in the majority of instances of intestinal fermentation, is composed of creosote, tincture of capsicum, tincture of nux vomica, and elixir of calisaya, given preferably at meal-time. The latter named drugs are included for their gastric stimulating and general tonic effect. Under the use of this combination the patients always improve in general health and rapidly take on fat.

Acute diarrheas in infants and children are usually relieved by the administration of creosote in tablet form, the dose ranging from one-tenth to one minim. It is almost impossible to give the drug to children in any other way.

Benzosol in five-grain capsules every four hours or even three times a day has a happy effect in dysentery, but should always be followed by a saline laxative. Benzosol is said to be insoluble in the stomach, being broken up by the alkaline fluids of the small intestine into guaiacol and benzoic acid, both of

which are excellent germicides. Benzosol is preferably given alone, but may be combined with quinine, which in this section of the country is always of service. Salol, which is also an admirable intestinal antiseptic, will not combine with benzosol without converting the two powders into a liquid; but as salol owes its germicidal influence to the fact that it is broken up by the intestinal fluids into salicylic acid and phenol compounds, such a combination is not indicated.

Benzosol has been found of considerable value as an intestinal disinfectant in typhoid fever, lessening tympany and promoting healing; also hindering septic absorption and preventing reinfection, the dangers of hemorrhage and perforation being thus reduced to the minimum.

* * *

Dr. H. A. Cottell: Creosote is an ancient remedy, but the paper read by Dr. Skinner is of great practical value. I have never prescribed benzosol, but have used a preparation called lysol, which is chiefly cresylic acid.

When it comes to therapeutics, the question involved primarily is disinfection of the alimentary canal, which is the object sought to be obtained since the earliest days of the administration of creosote, though the cause of intestinal fermentation was not understood until bacteriology was developed. It is well known that purgatives owe their efficacy largely to the fact that the alimentary canal is thereby disgorged, and this is the principal reason why, under purgation, headaches, malaise, constipation, etc., are so often markedly improved. And this suggests the question of fecal infection; but even that is nothing new. At one time Sir Andrew Clarke created quite a breeze in the scientific world by introducing his theory of "fecal anemia," by which was meant impoverishment of the blood due to absorption of poisonous products from the alimentary canal, constipation being invariably present. After the matter had been freely discussed *pro* and *con* in the medical press, the *British Medical Journal* published an editorial stating that Sir Andrew Clarke had discovered nothing new, but had simply revived an old idea!

In connection with disinfection of the alimentary canal, the question of hygiene occurs to me: Would not the alimentary tract be in better condition if only food that had gone through the fire were used; in other words, ought not more attention be paid to aseptic foods? As is well known, typhoid fever is a preventable disease, yet many of us are treating cases of this

disease at the present time, some of which may be very serious. Should not all milk be boiled before using, all water be filtered, and all food be eaten hot from the oven or pot?

I hoped the essayist would say something about creosote in the treatment of tuberculosis. I have always had an idea that it was more or less a "fake;" for instance, the enormous quantity of creosote said to be given by so-called tuberculosis specialists seems absurd. Creosote, carbolic acid, and all kindred drugs are extremely irritating, and it is certainly unwise to crowd them upon the human system in such large doses as certain specialists recommend!

Dr. Frank C. Wilson: I have prescribed creosote extensively, but more in the manner alluded to by Dr. Cottell than for the purpose of intestinal antisepsis. I give it frequently in combination with guaiacol, and with calomel as a purgative. I have also used benzosol with beneficial results.

I have prescribed creosote in many cases of pulmonary tuberculosis, but cannot positively state whether any actual benefit was derived therefrom. The drug has been administered in small and large quantities, even fifty-six drops three times a day, and I have known of ninety drops being given three times a day, the idea being that benefit could only accrue when the system became thoroughly saturated therewith. Used as a germicide its object can only be attained when it reaches the location of the germs in sufficient concentration to be effective. Taking the circuitous route by which it reaches the lungs, it can be effective only when the system becomes saturated so the odor of the expired breath and skin plainly indicates the presence of creosote.

Gastric irritation can be obviated by giving the drug after meals when the stomach is full. Large doses can be given satisfactorily if emulsified in hot milk. If the milk is brought to boiling point, the creosote then dropped into it and stirred until thoroughly broken up, each atom of creosote being thus coated with a thin layer of milk, much larger doses can be taken than by any other method. The mixture should be constantly stirred until cool enough to drink, and taken as hot as can be sipped.

Creosote may also be administered in capsules after meals, and if necessary to increase the quantity the dose may be subdivided—*i.e.*, never giving in one dose more than ten or fifteen minims. If more is given the drug would likely reach the walls of the stomach undiluted and cause irritation.

Dr. B. C. Frazier: I frequently prescribe both creosote and carbolic acid, the latter especially. In gastrointestinal disturb-

ances of young children carbolic acid relieves nausea and vomiting, also assists in purifying the alimentary tract. Of course it is questionable how much of the intestinal canal can be so purified, but I have used the remedy with uniformly good results.

I have administered creosote in quite large doses. I remember to have given a child eighteen minims at a dose, beginning with one-half minim and gradually increasing the quantity. The child quickly improved and gained in flesh. I usually give it diluted with glycerin and whisky. All the preparations of creosote have their indications and may be given with the expectation of beneficial results.

DR. LOUIS FRANK: Creosote is certainly a good remedy. The effect desired is not so much to asepticize the intestinal canal as to render antiseptic that which is taken into the stomach and thus passes into the intestine. Nature is constantly getting rid of bacteria, and she can be materially assisted by rendering antiseptic that which is taken into the stomach.

In this connection, while Dr. Cottell was speaking, I asked the essayist if it were not necessary that a few bacteria be present in the intestine; do they not assist digestion by their action in breaking up food which is ingested?* The constant administration of drugs of the character under consideration might therefore be harmful.

The indications for administration of creosote extend far beyond intestinal disturbances. It is an excellent tonic, and in pulmonary diseases there is undoubtedly a beneficial influence from its use. The indications for drugs of this class, from a medical standpoint, are so varied that to attempt to cover the entire subject would open a very wide field.

DR. WILLIAM BAILEY: The chemistry of this subject is entirely beyond me; I cannot carry in my mind its various divisions, subdivisions, etc.; but I am quite partial to beechwood creosote for many purposes.

*Microbes as a class have been so roundly abused that the discovery of the fact that we cannot altogether get along without them induces a certain sense of satisfaction. A Russian professor has been taking great trouble to determine the value of germs in assisting the human body to perform its natural functions. He fed animals on food that had been carefully sterilized, and compelled them to breathe germless air. The experiment proved that the presence of microbes is necessary to digestion. The animals soon showed the effect of the deprivation. First they began to droop, then lost their appetites, and finally weakened and died. It was found that the food simply would not assimilate when the microbes were absent. This series of experiments has been extended to the vegetable world. It is now proved that certain plants can only assimilate the nitrogen which is necessary to their growth through the action of the microbes that live at their roots.—Quoted from *American Practitioner and News.* (C. C. M.)

In regard to disinfecting the alimentary canal: oftentimes much good will result if the patient is allowed but half the quantity of food usually taken, and more good would come by selecting food which would not induce disorders we endeavor to combat by administration of creosote.

Typhoid fever patients with marked distention of the abdomen, diarrhea, etc., are in my judgment often overfed, and the quantity of food permitted should be materially reduced. Even children with cholera infantum, summer diarrhea, and other gastrointestinal disturbances are oftentimes overfed, they are not nourished by the food ingested; and, indeed, more than likely food is the real source of the trouble. Patients with typhoid fever are often markedly improved by twenty-four to forty-eight hours abstinence from food, then permitting only such as can be assimilated. However, the preparations of creosote are indicated in conditions of the alimentary canal such as have been described. Whether it is possible to disinfect the entire length of the intestinal tract is immaterial, since the patient markedly improves following administration of creosote or other disinfectant, along with the modifications in feeding mentioned.

I prescribe more beechwood creosote than any other preparation of this drug. In small doses it does not disturb the digestion, but on the contrary often improves it.

I have used benzosol since its introduction, and it always impressed me as being a distinctly effective remedy. Salol is an ideal intestinal antiseptic, since it is not soluble in acids and passes through the stomach into the duodenum before any change takes place, then is broken up into its compounds and does its work where needed.

In the treatment of pulmonary tuberculosis I have considerable confidence in beechwood creosote. If permitted but one remedy in treating phthisis pulmonalis, I would select beechwood creosote. Whether it is eliminated by the lungs or otherwise I am uncertain. Much of the benefit from its use may result from improved nutrition, and that fact affords another indication for creosote. One difficulty encountered in treating phthisis is that the patient is unable to eat and assimilate his food. Patients with phthisis are not likely to fail rapidly as long as the stomach will tolerate and assimilate food; on the other hand they fail quickly when no longer able to relish and assimilate food, and much of the benefit from the administration of creosote in such cases is unquestionably due to improved nutrition.

Creosote in proper dosage does not irritate either the stomach

or kidneys, and it may be increased to any amount the patient can take. However, I have never given fifty-six minims at a dose as mentioned by Dr. Wilson! If anything is to be accomplished by this drug it ought to be within a range of twenty to thirty minims at a dose three or four times a day.

I am glad to hear Dr. Wilson's suggestion about prescribing creosote in hot milk; and, as suggested, it is important that the drug be given when the stomach contains food.

I do not often prescribe carbolic acid internally. Benzosol, salol, and other similar combinations containing creosote and carbolic acid may be administered with more comfort to the patient, and have their indications especially in infants and young children; but under most other circumstances I prefer beechwood creosote.

Dr. F. C. Simpson: I have used creosote quite extensively, especially in the treatment of summer diarrhea in young children, and have found it effective in controlling the gaseous conditions which frequently occur in such cases from continued fermentative changes.

As Dr. Bailey suggested, feeding is an important feature. In both typhoid fever and so-called summer complaint, if the diet be limited there will be less necessity for the administration of creosote and other intestinal antiseptics.

I have prescribed benzosol with excellent results in many cases of typhoid fever. It is an admirable preparation, and there is nothing disagreeable in its after-effects. It is not broken up in the stomach, its influence being exerted entirely upon the intestinal tract.

Dr. C. Skinner: The administration of creosote in intestinal disturbances, especially those characterized by flatulency—where people go to the table feeling hungry, and after taking a few mouthfuls of food have a sensation of fulness and are unable to take anything more—is oftentimes followed by most happy results. The drug is eliminated by the lungs and by the skin. I have also detected the odor of creosote in the stools.

I have found it unnecessary to restrict the diet as suggested by some of the speakers. It may be wise, however, to thoroughly cleanse the intestinal canal by means of salines before giving creosote or benzosol.

As to the effect of carbolic acid, creosote, or its combinations in the treatment of phthisis, Dr. Bailey struck the key-note when he said that it improved nutrition. If the tuberculous patient can be kept well nourished he is certain to improve. The appe-

tite usually begins to fail first. As a rule the patient takes little exercise and the appetite becomes impaired. If he can be induced to take plenty of exercise, if his nutrition can be stimulated with creosote, improvement will naturally take place—*i.e.*, by improving the condition of the alimentary canal appetite returns, food is relished and assimilated, and the patient feels better. In ninety per cent of cases the general improvement following administration of creosote is due to the fact that the patient is able to take and assimilate food.

Carbolic acid is now practically relegated to the surgeon, who uses it because it is a fixed product. Creosote is a mixture, ninety per cent being guaiacol. If creosote is objectionable, as stated, why not give guaïacol? Benzosol is fifty per cent guaiacol.

The medicinal value of pure and fragrant coffee has long been recognized, and the coffee trade in Turkey may be considered of importance to the whole medical profession. Turkey annually receives, according to the *British Medical Journal*, from other countries 9,350,458 kilogrammes of coffee of a value of 93,333,278 piastres, and exports only 4,853,423 kilogrammes, representing the sum of 43,876,778 piastres. Of late the trade in coffee has considerably decreased, due to the fact that the coffee plants of the Yemen plantations have been suffering from a mysterious disease which has not yet been fully and properly investigated. In consequence of this disease the grains become foul and soft inside and very black outside. A short time ago several branches with diseased coffee grains were sent to Constantinople for purposes of examination and chemical analysis. The result of this has not yet been made known. Another reason for the diminution in the trade is the practice of mixing with real coffee all sorts of extraneous matter, sometimes quite harmless, very frequently, however, deleterious to the health. A rather usual mixture is the powder of dried figs. The practice of adding the latter to pure coffee is in great vogue, not only in Turkey but also in Austria, in certain parts of Germany, in Roumania, and in Servia. Fig powder is added to coffee in the proportion of 1 to 3. The beverage prepared of this mixture has a deeper color and possesses considerable nutritive qualities, but much of the essential quality of the coffee is, of course, lost.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

HEREDITY AND AMERICANISM.

To the student fresh from the democratic atmosphere of the public school, the very frank allusions by medical teachers to class distinctions come as a sort of a shock. It is a novel yet explicable fact that the rich man should have different phases of disease as compared with the poor man. It is a still greater surprise to note that physicians should recognize class distinctions in other ways in the treatment of patients. The student gradually adjusts himself to the practical divergence from democratic ideals, and learns that, after all, the apparent inconsistencies are necessary and are in the best interests of the patients themselves.

As a student matures into the physician he becomes aware of a very real issue between the theoretical teachings of heredity and the doctrine that all men are free and equal.

Whether we regard the matter from the standpoint of abstract science or from that of the ultimate welfare of our country, it is evident that scientific men, and those who wish to exert their influence for the best interests of humanity, must seek the absolute truth, regardless of prejudice or sentiment. In a crude, practical sense it is perfectly plain that all men are *not* equal, either physically or mentally, and that the measure of individual freedom which can safely be granted to the intelligent, conscientious, and self-controlled cannot be allowed to the ignorant, vicious, and licentious. It is equally plain that at two extremes of the social scale we have equally dangerous human elements. The idle, undisciplined, pampered offspring of a false aristocracy, and the ignorant, uneducated, servile product of an equally abnormal proletariat, are equally out of place in an ideal American community. They are not included in the intentions

of the constitution, and they cannot be satisfactorily dealt with by the general political and social scheme of our country. Very recently we have been compelled to make certain exceptions to our theories in the expansion of our territory to include certain alien races, and in the South retrograde steps have been taken toward the original, tacit ignoring of the negro as a political factor.

We have no patience with that form of race prejudice which assumes that the virtues and vices are assorted according to the political subdivisions of the Aryans. Men who speak with a nasal twang have robbed the public till, while, on the other hand, our country was held together in the period of civil dissension, and municipal and State and national reforms have been achieved, by the help of men who speak English with a decided foreign accent.

In no petty spirit of prejudice can either racial or family heredity be considered. And yet there remain many practical problems in regard to which heredity must be seriously and impartially studied, both from political and economic standpoints.

Without expressing a definite opinion upon any of these topics, the following may be pointed out as having a very practical application in our political and social organization and as requiring thorough investigation:

1. Is it possible to accord full political liberty to various races in the same government without social amalgamation and miscegenation?

2. Using the term *race* to apply to the five great branches of humanity, to what degree do these races represent distinct varieties, in the sense in which *variety* is applied to the lower animals, and to vegetables?

3. Is miscegenation among these five races desirable or undesirable; do mixed breeds tend to higher susceptibility to disease and ultimate extinction? Is miscegenation among certain races desirable and among certain others undesirable?

4. Without reference to possible fusion of races, can these five great branches be arranged serially, in order of superiority? If so, is the superiority general, or does one race excel in certain characteristics, another in others, etc.? Granting that such differences in rank exist, are they essential or accidental—*i.e.*, relatively permanent, or removable by altering the environment, including facilities for education and change of habits?

5. Limiting ourselves to the Caucasian, or still more specifi-

cally, to the Aryan peoples, to what extent is inbreeding advisable? In particular, in our present white population can better results be obtained if colonial Americans intermarry with other colonial Americans, Germans with Germans, Irish with Irish, Italians with Italians, or if, on the other hand, these lines of descent are crossed? It must be remembered that at present Americans are not so thoroughly a mixed race as is commonly supposed, but that marriages across lines of national descent are still comparatively infrequent.

6. Limiting ourselves mainly to families, is there, or is there not, an accumulated capability for the best results, if descendants follow rather closely in the general line of activity of their forebears?

7. To what extent is it possible to eradicate vicious physical, mental, and moral tendencies by judicious intermarriage, according to temperament, diathesis, etc.?

8. To what degree is individual heredity essentially due to embryologic factors, and to what degree to environment and training or unconscious influence after birth?

It is obvious that the problems presented are not easy, and that considerable time will be required for even their probable solution. Meanwhile, conditions will have changed somewhat. It will be plain that if the investigation nullifies the action of heredity—obviously excepting certain purely physical characteristics of no great importance—the free and equal theory on which our government is based will receive greater and more universal credence than ever. Opposite results will by no means justify a despotic and arbitrary class government, in any part of the world, or the Chinese wall system of national separation, but rather a systematic, coöperative movement by mental development, good nutrition, encouragement of reproduction in some directions and its repression in others.

EDITORIAL NOTES.

Less Medical Students in France.

That this country is not alone in the falling off in the number of medical students is shown by statistics recently published in a French exchange. In that country the number of young men entering the ranks of medical students is rapidly diminishing. The year 1906 shows a decrease of nearly 1100 over the year 1895, not counting foreign students, whose numbers had dimin-

ished 46.8 per cent—that is, from 1137 in 1895 to 604 in 1906. The reason ascribed for the falling off in foreign students is due to the increasing strictness of the regulations for admission to the French schools. The decrease in native-born students is thought to be due in part to the changes in the entrance examinations, military service, etc. There seems to be a movement in all civilized countries to restrict the output of medical men. This appears necessary, as everywhere the field has become overcrowded. Less physicians, but those better qualified, can only work for the general welfare, not only of the profession itself but of the public.

The Sanitation of Barber Shops.

That few infectious diseases are disseminated by barbers can only be ascribed more to good luck than anything else. Barbers are notoriously careless of the first principles of cleanliness in regard to some of their implements. The following rules were recently set down by the health commissioner of Chicago for the government of barber shops in that city: "For each shave—free or not—one towel. All shaving mugs must be antiseptic. Barbers making change and handling money must wash their hands." Barbers often do not use a separate towel for each customer, says the commissioner, though they should do so. The customer cannot always see from his chair what is going on. There is more danger of the spread of disease in this way than any other. Use of one towel for two patrons must be prevented. These simple rules ought to be generally adopted and enforced.

Death of Professor Brouardel.

The recent death of the distinguished French physician, Prof. Paul Brouardel, removes from the ranks of the medical profession one of its most brilliant followers. For the past twenty-five years Dr. Brouardel held every official position it was possible to hold, from chairman of the Conseil Superieur d'Hygiene de France to president of numerous medical societies. For many years he was dean of the Faculty of Medicine, and was especially well known for his lectures on medical jurisprudence and the post-mortem examinations which he conducted before the students at the Paris Morgue for the last thirty years. The whole world as well as France owes much to him for his services as a hygienist and medical jurist.

ITEMS AND NOTES.

An international committee for the organization of tours of medical study and observation has been founded. The president is Professor Kossmann, of Berlin.

On the motion of M. Roussel, the Municipal Council of Paris has just decided to recommend the creation in the Faculty of Medicine of a chair of oto-rhinology-laryngology.

The New Jersey State Board of Health has traced the recent outbreak of typhoid fever in Trenton to the milk supply, and has announced that several dealers are to be prosecuted.

The Sultan has authorized the opening of a subscription for the funds necessary to construct a maternity hospital in Constantinople, and has started the collection with a liberal donation.

Dr. Alexander Hugh Ferguson, of Chicago, has had conferred on him by the King of Portugal a Commandership in the Order of Christ of Portugal, in recognition of his contributions to surgery.

The seventh quinquennial International Homeopathic Congress convened at Atlantic City on September 10, in conjunction with the American Institute of Homeopathy, under the presidency of Dr. W. E. Green, of Little Rock, Ark.

Professor Pozzi, of Paris, has been presented with a gold medallion portrait by the sculptor Chaplain and a memorial volume of researches by his former students, on the occasion of the twentieth anniversary of his work at the Broca Hospital.

Dr. King, of the U. S. Public Health and Marine Hospital Service, who has been in Montana studying the manner of infection of spotted fever, states that he has confirmed the theory of the agency of ticks in transmitting the disease, having succeeded in inoculating animals in this way.

At the meeting of the Association of Military Surgeons, held in Buffalo recently, it was announced that the Enno Sanders prize had been awarded to Major Pilcher for an essay on "The Training of the Medical Officer of the State Forces to Best Qualify Him for Local Service and for Mobilization with National Troops."

THE Mexican government has offered three prizes, each of the value of $20,000, for (1) the discovery of the typhus fever germ; (2) the mode of its transmission to man; (3) a successful preventive or curative serum or other effectual remedy. Communications should be addressed to the secretary of the Medical Academy, Dr. Cosio, Ortega 9, Mexico.

THE public bath commissioner of St. Louis has called upon the Board of Health for statistics showing which are the special centers of tuberculosis in the city, as he believes the baths should be established first in those districts. In four of the seven sanitary districts the number of cases reported for the past year ranged from 260 to 271, and in the remaining three from 192 to 249.

THE International Congress of Dental Surgeons, which was held in Geneva in the early part of August, passed resolutions urging the coördination of the legal requirements for dental practice in all countries, and the institution of an inquiry into the value of diplomas granted by various schools of dental surgery. The congress further passed a resolution insisting on the importance of mechanical instruction as a supplement to theoretical teaching.

A SPECIAL DESPATCH to the *New York Times* states that an inquiry made regarding the use of trypsin as a cure for cancer in the London hospitals has elicited unfavorable reports. The London Cancer Hospital has discontinued the use of the remedy, the surgeon having failed to obtain any beneficial results from it. In some hospitals the experiments are still proceeding, but apparently without expectation that they will result otherwise than have the tests at the Cancer Hospital.

PROFESSOR BEHRING, we learn from the *British Medical Journal,* which first published the announcement of his discovery of an immunizing and curative remedy against tuberculosis, has decided that the time has come for a practical trial of the remedy, to which he has given the name Tulase. The preparation will, it is stated, be supplied gratuitously on certain conditions to hospital clinicians who apply to Professor Behring's assistant, Dr. Siebert, at the professor's private institute at Marburg.

As a result of conferences between the States of New Jersey, Michigan, and Ohio, formal agreements for reciprocity in medical licensure have been entered into between those States and New York. The basis upon which reciprocity obtains is a license earned on examination in any one of them. The candidate for

indorsement of a medical license must present credentials from the officials of the State board of medical examiners which licensed him, showing that at the time of such application he was a reputable practitioner.

THE Simon Fund of $25,000 for the furtherance of research on syphilis has been divided between Professor Neisser, of Breslau, who receives $20,000, and Dr. J. Siegel, who receives $5000. Dr. Lesser has been awarded $1500. The trustees of the Pettenkofer Fund, at a meeting recently held at Munich, unanimously awarded the prize founded in memory of the great hygienist to Dr. Schaudinn for his discovery of the parasite of syphilis. The amount has been paid to Dr. Schaudinn's widow.

PROF. SALVATORE TOMASELLI, the Nestor of clinical teachers in Italy, died on August 1. He received his medical education at Naples, and began to teach as a private lecturer on medical diagnosis at Catania in 1857. About 1860 he began to collect the observations which led him ultimately to the identification of the form of quinine-malarial intoxication which is now known by his name. After acting for a number of years as professor of medical pathology, he was, in 1880, appointed professor of clinical medicine in the University of Catania. His great popularity as a teacher was shown in 1902, when the completion of his forty-fifth year of teaching was celebrated with immense enthusiasm by his pupils and colleagues.

DR. GIN WAI CHAN, a graduate of the class of 1906, National Medical University of Chicago, has been notified by the secretary of the board of health that he has successfully passed the examination for a license to practice medicine in Illinois, says an exchange. Dr. Chan was sent here by the Chinese government to study medicine, with a view to preparing him for the chair of surgery in the Imperial University at Pekin. It was through the Empress Dowager that the student was sent to Chicago to gain a medical education. It is said that he is the first Chinaman to pass the examining board of Illinois. Although a number of Chinese students have attended other colleges, none of them has successfully passed an examination.

A YEAR or two ago the establishment of the Empress Marie Feodorovna prizes for military medical aid was announced in the *Journal of the Association of Military Surgeons*. In the forthcoming Red Cross Convention of 1907 these prizes will be awarded for the first time, and it is hoped that American inven-

tors will be active in competition. It is announced that the central committee of the American National Red Cross will receive and forward, at its own expense, the plans, models, etc., of competitors, provided they meet the approval of a subcommittee, which will be appointed to pass upon them. Any competitor who prefers, however, may forward his invention direct to the jury. Correspondence concerning this question is invited by the American National Red Cross, War Department, Washington, D. C.

According to the *Australasian Medical Gazette*, the following is the method of inspection of meat in Queensland: All meat for home consumption is inspected under the slaughtering act, and all export meat is inspected under the live stock and meat export act. In both cases the meat can be traced back to the station from which it came; there is no possibility of diseased meat being consumed. Heavy penalties are provided for using meat which has been condemned. Each case of preserved meat carries a label certifying to its wholesomeness, while each carcass carries a tag. In addition to this, the inspectors see that all condemned meat is consigned to the boiling-down pots. It is officially stated that there has never been an attempt to evade the provisions of the act, and that on the contrary the companies are glad to coöperate with the government in putting a good article on the market, in the full assurance that any cause for complaint would react disastrously on their business.

On the occasion of the meeting of the British Medical Association in Toronto, the Senate of Toronto University conferred, says the *Medical Record*, the degree of LL.D. on the following members of the association and foreign guests: Dr. T. Clifford Allbutt, Dr. A. H. Freeland Barbour, Sir Thomas Barlow, Sir James Barr, Sir William H. Broadbent, Dr. H. W. Langley Browne, chairman of the Council of the British Medical Association; Mr. George Cooper Franklin, president of the association; Dr. William D. Halliburton, Sir Victor Horsley, Dr. Donald McAlister, president of the Medical Council of Great Britain; Dr. William J. Mickle, Dr. Louis Lapicque of Paris, Dr. L. Aschoff of Freiburg, Germany, and Dr. William J. Mayo, president of the American Medical Association. Four of the above were also recommended by the Board of Governors of McGill University for the degree of LL.D., these being Dr. T. C. Allbutt, Sir Thomas Barlow, Sir William Broadbent, and Sir Victor Horsley. Several of the recipients of the honor have already been similarly doctored by one or more other universities.

NEW PUBLICATIONS.

DISEASES OF THE NOSE, THROAT, AND EAR.

A new manual on diseases of the nose, throat, and ear has come from the press of the Scudder Brothers Company of Cincinnati. It is a work of Dr. Kent O. Foltz, of the Eclectic Medical Institute of that city. The work is designed chiefly as a brief treatise for the use of students and practitioners, and naturally special attention is paid to the treatment of diseases by eclectic medication. It is the contention of the author that there has been too great a tendency among writers on that subject to ignore practically everything except local measures in treating the conditions which are so prevalent in the upper respiratory tract and adjacent structures. The author believes that in the majority of inflammatory conditions of the upper respiratory tract and ears, if proper systemic measures are instituted during the second stage, a cure will result. He does not endeavor to make his list of suitable drugs encyclopedic in character, but mentions those which should be the basis of treatment, and leaves the student to exercise his judgment and common sense in the selection of other remedies that may be indicated. Those portions of the work which deal with anatomical and physiological subjects may well be commended for briefness and clearness. The field of operative surgery in the lines taken up is not covered with any great elaboration. The book as a whole is full of useful suggestions and is a commendable and conservative work.

Diseases of the Nose, Throat, and Ear. By Kent O. Foltz, M.D., Professor of Ophthalmology, Otology, Rhinology, and Laryngology, in the Eclectic Medical Institute. 643 pp. The Scudder Brothers Co., Publishers, Cincinnati, Ohio.

DISEASES OF THE PROSTATE GLAND AND ADNEXA.

In presenting this book to the medical profession the author has, by avoiding theoretical discussions, given a plain, practical, and concise summary of the methods and results of the non-surgical treatment of diseases of the prostate gland and their sequelæ as demonstrated by a clinical experience of more than twenty years. As the pendulum is slowly swinging back to more conservative methods in the treatment of prostatic troubles, this little volume will be found by the general practitioner to contain much that will be of interest and profit to him.

A Non-surgical Treatise on Diseases of the Prostate Gland and Adnexa. By Geo. W. Overall. Chicago: Rowe Publishing Company, 1906.

MATERIA MEDICA, THERAPEUTICS, AND PRESCRIPTION WRITING.

The text of this edition has been thoroughly revised and brought into conformity with the eighth revision of the U. S. Pharmacopœia. Twelve new articles and forty-three new paragraphs on important drugs have been inserted, and sixteen articles have been written. Material considered obsolete or comparatively unimportant has been removed. Intended chiefly for students, brevity of statement is one of the principal features of this compend.

A Compend of Materia Medica, Therapeutics, and Prescription Writing. By S. O. L. Potter, M.D., M.R.C.P. Seventh Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Co., 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Hints.

The August issue of the *International Journal of Surgery* contains the following: Cases of lateral curvature of the spine must be early recognized and treated, for otherwise the deformity is apt to become so fixed that a cure is no longer possible. The administration of thyroid extracts or iodides and the application of iodine ointments are only of value in recent cases of soft or parenchymatous goitres, especially in young persons. Epilation is of great importance in all follicular inflammations of the skin, since it not only removes a host of microbes but also affords access for antiseptics to the deeper parts of the follicle. To prevent the development of strictures of the esophagus after the swallowing of caustic substances, regular introduction of bougies should be resorted to at the end of a few weeks after the occurrence of the accident. Eczema of the breast should always be viewed with suspicion, for it may be a symptom of Paget's disease, and precursory to cancer. In these cases the growth may for a long time appear as a superficial ulcer, and thus lead to errors in diagnosis. In chronic mastitis the existence of pain and swelling of the glands in the axilla often awakens a suspicion of cancer. If the affected area is adherent to the skin and muscles, with puckering, the diagnosis may be possible before a microscopic examination has been made. In children suspected of having a foreign body in the larynx it will be generally found necessary to anesthetize the patient before a satisfactory laryngoscopic examination can be made, although in the presence of severe dyspnea no time should be lost in performing tracheotomy.

A Septic Catgut.

S. K. Keren (*British Medical Journal*, Aug. 11, 1906) reports the results of investigations which he has carried out on the subject of aseptic catgut. He finds that all the methods adopted up to the present fail to give completely satisfactory results, and therefore he has attempted to find a new method which will lead to the introduction of a permanently sterile aseptic catgut which is ready for use. He considers that such a catgut should be

sterilized without the use of antiseptics, should not contain any chemical substances which might transude into the tissues and harm them, should be firm and elastic, and should be put up in such a way that its fitness for use does not deteriorate with time. In order to insure the last-named point, he found it necessary to make a special glass tube. The tube, which he describes in detail, allows of the introduction and twisting of the gut, without it being touched by hand. The tube narrows above to a thin neck, above which it has a small bulb, and again constricts. The end of the gut is k' 'ted several times, and the knots are allowed to drop back as far as the bulb. The sterilization gave him much more difficulty than the tube did. At last he found that the vapor of water-containing alcohol was capable of absolutely sterilizing the catgut after about eight minutes. He therefore places the tubes containing the rolled-up catgut in a wire basket, which is of the same circumference as the alcohol vessel. The latter is made of copper and contains sufficient 70-per-cent alcohol to supply all the tubes, and the whole apparatus is then covered hermetically in with a hood, containing the tube for the cooler and a thermometer. The alcohol is then heated up to about 79° C., and kept at this temperature for twenty-five minutes. The tubes are then sealed up below, and then from one to three per cent of glycerin and absolute alcohol is filled into a cup from above. The upper end is then sealed up, and lastly the sealed tubes are again heated for one hour to 103° C. Catgut prepared in this way is absolutely sterile and reliable. He has tried the method with infected material and has subjected it to a number of severe tests, and finds that the process is satisfactory. He details his test experiments. Lastly, he describes a special apparatus which he has devised to keep opened tubes in without risking an infection. He claims that catgut prepared in this way is about half the price of ordinary sterilized catgut in the market.

The Modern Mastoid Operation.

A. Bronner (*British Medical Journal,* Aug. 11, 1906) draws attention to the following points: (1) Operations on the mastoid process are often very difficult. (2) Every case is different, and there is no typical mastoid operation, but the plan and extent of every operation must depend on the area of the diseased bone, and on the topography of the various parts: lateral sinus, mastoid cells, and mastoid antrum. (3) The chisel should be used as little as possible, and the bone forceps and gouge as much as possible.

(4) In all cases it is absolutely necessary to open up the attic, remove the posterior wall of the meatus, and carefully explore and open up all the mastoid cells. (5) The great importance of preventing stricture of the cutaneous auditory meatus, and of making a flap or flaps from its posterior wall. (6) The use of skin-grafting when much bone has been removed. (7) The use of hydrogen peroxide for arresting hemorrhage during the operation, and for cleansing the cavity in the after-treatment. (8) The danger of the prolonged use of iodoform in the after-treatment, and the use of isoform or xeroform, and of aluminum acetate gauze.

Treatment of Cancer of the Breast.

Beverly MacMonagle (*American Medicine,* August, 1906) says that tumors of the breast are a threat at the well-being of the patient. Positive diagnosis cannot be made in the early stages without microscopic aid. All tumors of the breast should be removed with care to prevent reinoculation, microscopic diagnosis made, and radical operation proceeded with at once if found malignant. This method gives the best chance of improving the results of surgical treatment of cancer of the breast.

MEDICINE.

The Pathogenesis of Colitis in Man and Animals.

S. Flexner and J. E. Sweet (*Journal of Experimental Medicine,* August, 1906) says that the facts described in their paper are intended to bear upon the pathogenesis of colitis in man and animals. The toxin of the Shiga dysentery bacillus is liberated from the bacillus through the process of autolysis. In rabbits the toxin is not absorbed directly in an active form by the gastro-intestinal tract; in man, however, absorption of an active poison does take active place from the intestine. The toxin is excreted in rabbits and probably in man as well by the intestine, chiefly probably by the large intestine, which being injured by the act of elimination reacts by the development of inflammation, etc. In rabbits the characteristic action of the toxin depends upon the integrity of the biliary secretion into the intestine. When the bile is prevented from entering the intestine, either by ligature and section of the duct or by establishment of a biliary fistula, no lesions whatever of the large intestine appear, or they are inconsiderable in extent. The loss of toxin through a biliary fistula

does not prevent in rabbits the lethal effects which are caused, apparently, by a nervous poison. The tying off of the bile-duct seems to prevent the passage of the toxin, in amounts sufficient to cause the large intestinal lesions, into the blood. The liver, therefore, in this condition tends to hold back the toxin from the general circulation. The peculiar effects of the toxin on the large intestine in rabbits are not produced at once, but would appear to depend upon successive acts of excretion of the poison by the bowel. The establishment of biliary fistula reduces the intensity of action of corrosive sublimate upon the large intestine in rabbits; and the lesions of ricin poisoning in these animals are also modified by this operation. Dysentery toxin is destroyed by peptic digestion, and also, though probably more slowly, by tryptic digestion. The absence of power of the toxin to cause poisoning in rabbits when it is brought directly into the lumen of the intestine is not explained by the destructive action of trypsin. The character of the histological changes in the cecum of rabbits caused by dysentery toxin points to an action upon the substance and not primarily upon the surface of the intestine.

The Insane Lovers.

John W. Stevens (*Medical Record,* Aug. 18, 1906) calls attention to this subject as one of much importance to the general practitioner, who first sees these cases. They are not uncommon in asylums and in neurological practice. The patient may seem clear and rational on all other subjects, so that for some time she is considered entirely sane. The maniacal insane lovers differ in certain prominent features from those of the paranoiac class. In the former group the origin of this love is always to be traced to abnormal sexual excitement, increased susceptibility to stimuli, facilitated release of impulses, and the lack of the restraining influence of the ethical sensibilities in the presence of elation, and sense of well-being. At the beginning of this condition in the paranoiac case this love is only a part of a progressive and systematized delusional state. A strangely erotic element is not necessarily present. The maniacal patient often recognizes the abnormal nature of her impulses, while the paranoiac never does. The paranoiac is practically always monogamous, the maniacal often polygamous. In the latter the love disappears with the subsidence of the active symptoms of the individual attack, while in the former it remains throughout life. These patients should be carefully looked out for, not only for their own sake, but for the sake of their victims.

Does the Drinking of Water Give Typhoid Fever?

R. G. Eccles (*Medical Record,* Aug. 11, 1906) declares that there is no reasonable room to doubt that the development of typhoid fever is connected with the use of infected water; but that typhoid fever results from the drinking of infected water is quite a different proposition. He then emphasizes the important part which flies play in carrying disease germs to food. These insects go through human excreta, garbage, slops, sputa, and decomposing matter one minute, and then wade over our food the next. It is easy to see how food may multiply disease germs to the danger-point, but it is not evident how any person could take the disease from water that thousands are drinking without the slightest injury. Typhoid germs injure by their toxin. When these germs get into food there is practically no limit to the poison that they are able to produce if the conditions are favorable. The writer then goes into various phases of this question. He considers water, dust, and fomites as mere seed sowers. Food is the disease breeder. In the late war the Japanese lost only one-sixth as many from typhoid fever and dysentery as did the Russians. The writer ascribes this fact to the differences in the character and the method of caring for the food of the two nations.

A Study of Epidermal Fibrils.

R. L. Thompson (*Journal of Experimental Medicine,* August, 1906) says that in certain animals, in addition to the protoplasmic fibrils of the stratum filamentosum that are present normally in human epidermis, there are well developed fibrils in the cells of the stratum germinativum. These fibrils are present in the human epidermis only under conditions of increased cell activity. These fibrils, that are prominent in the stratum germinativum of human epidermis under conditions of increased cell activity, seem to increase in direct ratio to rapidity of cell production. The differentiation of these fibrils of the stratum germinativum into the finer fibrils which connect the cells of the stratum filamentosum can be observed under proper conditions of growth, and therefore there should be no separation of the fibrils into different groups with various names. This process of fiber production by the cells of the human epidermis is analogous to increased fiber production by various other cells under similar conditions, and may be of importance in identifying or classifying new growths of epithelium.

THERAPEUTICS.

The Serum Treatment of Cerebrospinal Meningitis.

S. Flexner (*Journal of the American Medical Association,* Aug. 25, 1906) has studied the exudates from sporadic cases of cerebrospinal meningitis in the Rockefeller Institute and noticed the peculiarities of the diplococcus intracellularis and its toxin, experimenting chiefly on small guinea-pigs. He also experimented on monkeys to reproduce the lesions and symptoms of cerebrospinal meningitis in man, introducing the cultures into the spinal canal by lumbar puncture, and found that the lower monkeys could be infected without great difficulty with the diplococcus, reproducing the pathologic conditions and symptoms of epidemic cerebrospinal meningitis. The cocci thus injected distributed themselves in a few hours, producing a meningitis and an exudate accumulating chiefly in the spinal meninges and the basal meninges of the brain. The uniformity of the exudate in this latter location and the rarity of its appearance in any amount over the convexity led him to doubt the validity of the reasoning which ascribed this localization in man to the entrance of this infection through the nasal membranes. Although the lesions and conditions are comparable with those in man the susceptibility of the monkey seems to be much less ably effective in human infection. The proliferation of the cocci also is comparatively small in monkeys.

Flexner also experimented with antisera prepared in rabbits, goats, and large monkeys. If the experimental disease in the monkey could be checked by the lumbar inoculation of such antisera without later ill effects, the possibility of a serum treatment in man is also suggested. The details of the experiments are given both on guinea-pigs and monkeys, goat serum being used and control animals being also observed in each case. In a series of five large monkeys, the results of the antiserum inoculations were fairly successful in four, but one altogether unexpected failure occurred. In guinea-pigs infected by peritoneal inoculation the goat serum was protective with simultaneous injection of one cubic centimeter of antiserum, and also as a therapeutic application when given intraperitoneally two and four hours respectively after the inoculation. Subcutaneous injection several hours after infection failed to protect even with larger doses of the antiserum. He does not yet consider it safe to predict how far the results obtained with monkeys are applicable to the treatment of

cerebrospinal meningitis in man, but further experiments may develop something of value. If it were practicable to employ monkeys to produce antisera to be used in man, the danger of serum intoxication might be lessened, while the good effects of the immunity principle might be retained. At present he does not think the injection of alien sera into the human spinal canal should be undertaken until their physiologic action has been worked out in more detail on monkeys. It is his intention to continue the studies already begun along these lines.

Internal Antiseptic Treatment of Tuberculosis.

H. H. Malone (*Journal of the American Medical Association,* Sept. 8, 1906), after remarking on the tolerance of the human system to powerful drugs and the susceptibility of the tubercle bacillus to the destructive action of antiseptics, proposes an antiseptic treatment of tuberculosis. The drugs he would employ are iodine and phenol, the latter lessening the irritating action of the former and permitting the use of larger doses. Both, he claims, also promote constructive metabolism under proper conditions. The irritating and caustic properties of phenol can be materially lessened by proper dilution, and still further by the action of camphor, and by gradually increasing the dose, he says, much larger doses may be given to advantage than the authorities would lead us to believe. He mentions a dose of 14 grains every two hours, given by Wigglesworth in influenza and by Atkinson in plague, but he prefers to give smaller doses in the beginning and gradually to increase the amount until tolerance is acquired. The formula which he has himself successfully used is given as follows: Phenol and tincture of iodine, each 160 minims; spirit of camphor, 3½ drachms; glycerin, c. p., ½ ounce; and equal parts of cherry-laurel water, cinnamon water, chloroform water, and tar water to make 15 ounces. Mix and allow to stand until all free iodine disappears. Then make an emulsion by adding one ounce each of cod-liver oil and powdered acacia. Begin by giving one teaspoonful in half a cup of water every four hours, and gradually increase the dose to a tablespoonful at one-hour intervals. Variations can be made in this according to the requirements; much depends on the technique in the management of each individual case.

While not speaking positively as to the action of each of the principal ingredients of the above, Malone thinks there is a combination of direct antiseptic action on the bacilli with a

favorable influence exerted, particularly by the iodine and camphor, on phagocytosis and other protective agencies of the living body. The leucocytes are increased in number and symptoms indicate neutralization of toxins or inhibition of their formation. The tubercle bacilli are more deeply stained by carbolic fuchsin in the sputum of patients under this treatment. A detailed report of his results is promised in the future, but they have been so satisfactory as regards disappearance of the bacilli, increase of weight, and apparent arrest and cure in some even advanced cases, that he is induced to place the method before the profession.

Strychnine Injections in Diabetes Insipidus.

Ketly (*Therapie der Gegenwart,* No. 3, 1906) had good success with injections of strychnine nitrate. He commenced with 0.5 milligramme, increasing the dose every second day by 0.1 milligramme until a maximum of 0.01 gramme was attained. His patients were three adult men, and the injections were given subcutaneously daily for about a month, and then by the mouth for three days. The urine dropped from 1800 to 1500 cubic centimeters, and all the symptoms permanently disappeared. In another case the diabetes persisted until syphilitic symptoms were alleviated by inunctions; on the administration of strychnine they then disappeared.

GYNECOLOGY AND OBSTETRICS.

Hydrometra in an Aged Subject.

A. Mond (*British Medical Journal,* Aug. 11, 1906) applied the name "hydrometra" to a cystic papilloma of the uterine wall in a robust woman seventy-one years of age. She declared that she was free from any swelling or discomfort till eight weeks before she consulted Mond. Then attacks of dysuria occurred. Mond found that the bladder was extremely distended. After he had emptied it a tense tumor could be defined reaching from the pelvis to the umbilicus. It closely resembled an ovarian cyst. When the abdomen was opened the tumor was seen to be the uterus enlarged to the size of a man's head. Supravaginal hysterectomy was performed, and as the knife passed through the cervix a great quantity of gelatinous fluid escaped. The uterus was examined; a cystic tumor bearing papillomatous growths was

discovered. It apparently had developed in the uterine cavity, but as it had attained large proportions its original seat was not clearly definable. Lomer, in discussing Mond's case, noted two cases in which "ischuria paradoxa"—unaccountable distention of the bladder—occurred in association with uterine fibroid, but it is more frequent after operations, when it usually develops insidiously.

The Sociologic Importance of Oöphoritis Complicating Mumps.

A. Troitsky (*Archives of Pediatrics,* August, 1906) reports his observations in an epidemic of mumps which had occurred in a girl's boarding-school. Thirty-three cases were observed, of which thirteen had inflammation of one or both ovaries. Of these thirteen girls, eight had begun to menstruate, while five had not as yet sufficiently developed to perform this function. Bilateral mumps gave rise to bilateral oöphoritis, while unilateral mumps was followed by the involvement of only one ovary. Troitsky considers oöphoritis due to mumps or to other infectious diseases as a serious complication, during which the patient should be kept in bed with local applications and other derivative treatment. He cites the observations of a number of writers who have found atrophy of the ovaries as the result of these inflammations, and who have shown the parenchymatous or even interstitial processes that go on in these organs in consequence of the infection, and considerable portions or the entire organ may be destroyed thereby. Mumps and its accompanying oöphoritis thus acquire a sociological importance quite in contrast with the innocent character usually attributed to the disease.

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ORIGINAL CONTRIBUTIONS.

SURGICAL ADVANCES IN ABDOMINAL CONDITIONS.

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In his college course the medical student is taught that each disease is a pathological entity. But when the student graduates he finds that very often diseases do not present classical aspects, and he realizes at last that pathological conditions are generally simply variations or modifications of a type. Then the graduate becomes valuable as a diagnostician. It is a defect in medical teaching that such hard and fast rules are laid down in teaching. As the late Professor Goodell was fond of saying, "there are no hard and fast rules in medicine."

The problems of disease are modified by each patient's habits, disposition, environment, and character. The physician must adapt his treatment to meet these conditions; he must treat his patient and not his disease. It is very easy to give drugs, but it is very hard to change habits, correct errors of diet, and the influences of environment and temperament. To overcome these agencies is the life struggle of the conscientious physician.

In no branch of medicine has there been greater change than in the conditions and diseases of the abdomen. Take as an illustration the condition of gastroptosis. Search the books of even fifteen years ago for data on this important phase of abdominal conditions and you will find them largely silent.

Now volumes are devoted to this subject. The latest word is from Beyea, who has devised an operation of gastropexy for the relief of the condition. The principle of his operation is that by placing three rows of interrupted silk sutures from above downward and from right to left through the gastrohepatic and gastrophrenic ligaments, a single broad transverse fold is made which

shortens these ligamentary supports and elevates the stomach to its normal position without disturbing the physiologic mobility of that organ. In addition, no abnormal adhesions are formed between other structures; there is no fixation of the stomach, and with the formation of a broad surface of adhesion between the surfaces plicated sufficient strength is gained in the shortened ligaments to maintain the stomach permanently in its normal position. Beyea has determined by the physical examination of a patient three and one-half years, and another one and one-half years after operation, that these are the facts. Eleven cases have thus far been operated on by this method—5 by the author, 2 by Martin, and 4 by Bier; all suffering for from five to fifteen years with very severe symptoms of gastroptosis, yet the convalescence in each case was normal and easy. The patients were kept in bed in the recumbent position for four weeks after operation, on a special diet; in every case the improvement in health has been most remarkable and the relief of symptoms complete; food of any character is taken without restriction. In no patient, regardless of the time which has elapsed since operation, has the stomach changed its position. The completeness of the relief, the simplicity of the operation, and the fact that it is practically free from danger, strongly recommend this operation in every case of gastroptosis in which the suffering is great or intolerable. It is well to remember, however, that the patients thus far operated on represent but one class, those with gastroptosis, showing no relaxation of the abdominal walls or diastasis of the recti muscles.

In a very interesting article Cannon and Blake have recently shown an experimental study by the aid of Roentgen rays of gastroenterostomy and pyloroplasty as surgical means of obviating non-malignant pyloric stenosis. It is well known now that the stomach is not a passive bag, for during digestion the cardiac end slowly contracts, forcing its contents into the pyloric end, while over the pyloric end, during digestion, peristaltic waves are continually running, churning the food with the gastric juices and forcing the chyme into the intestine. The functionating human stomach as it empties shortens especially along the greater curvature, and the part of the stomach lowest when the organ is full or relaxed is not lowest when it empties, for the pylorus then becomes the lowest point. Even should "gravity drainage" occur, the pylorus is the natural outlet, so long as the stomach retains its power of contracting. Following an ordinary meal the peristalsis of the pyloric end of the stomach makes the contents

of this part more fluid than the contents at the cardiac end, for peristaltic waves move toward the pylorus; the intragastric pressure is three or four times greater at the pylorus than in the cardiac end. According to these observers, observations on large cats with gastroenterostomy openings of various sizes at various parts of the stomach showed that unless the opening, or stoma, was in the antrum (*i.e.,* close to the pylorus) the food, even when fluid, was pushed through the pylorus rather than through the stoma; it was found with peristalsis only in the pyloric end of the stomach, with the intragastric pressure much greater at the pylorus than elsewhere in the stomach, and with the food in the pyloric end normally more fluid than that in the cardiac end, that the food is forced into the intestine through the pylorus and not through the artificial opening when both ways of outlet are offered. Thus circulation of the food through the pylorus to the duodenum and back to the stomach through the anastomosis has been repeatedly observed, this circulation being observed best when the stomach was very full, for the stretching of the stomach separates the lips of the stoma and draws the intestinal wall into line with the gastric wall. The openings into the intestine at the stoma then become mere slits, and act like valves, permitting the entrance but preventing the exit of the food. Food should be mixed with the secretions poured into the duodenum; for these juices are highly effective in digestion, and also neutralize the acid chyme; and if food leaves the stomach by the stoma, it is not mixed with these secretions. Jejunal ulcers after gastroenterostomy may result from the presence of acid in a region in which the inorganic acid is not normally found. The stoma should be large and as near to the pylorus as possible, that the circulation of the food be rendered less probable by avoidance of overeating, and that so far as possible kinks be obviated by attaching a narrow band of the distal gut to the stomach for several centimeters, beyond the stoma, thus permitting peristalsis to become effective. The probability of a circulation of the food whenever the pylorus is left open, the non-mixture of the food with the digestive and neutralizing fluids in the duodenum, and the ever-present danger from kinks in gastroenterostomy, do not make the operation a perfect one, and in pyloroplasty these complications are avoided, and a too rapid exit of the food through the pylorus is prevented by rhythmic segmentation of the food in the duodenum, replacing partly the functions of the pylorus, and mixing the food with pancreatic juice and bile.

Jonnesco has reported several cases of that rare condition known as "gastric tetany;" thus in the 11 cases in which operative treatment was undertaken, 8 patients were permanently cured, and 3 succumbed to postoperative peritoneal complications. In every case of gastric tetany there was always some mechanical obstacle to the evacuation of the stomach; hence the stenosis is evidently primary, entailing dilatation of the stomach and hypertrophy of its membranes. The vomiting and peristalsis indicate stenosis of the pylorus, and all doubt is removed when tetany follows, generally developing at an advanced stage of the affection, localized in the muscles of the feet and hands, but sometimes extending to the limbs and jaws, while in exceptional cases it may extend to the body. Neuropathic atony of the stomach is sometimes the cause of abundant vomiting, but there is no peristalsis nor tetany, and restriction to a milk diet will generally put an end to the disturbances for the moment. Lancereaux's patient succumbed to progressive tetany, unoperated on, but the one reported by Jonnesco was entirely cured by posterior "transmesocolic gastroenterostomy."

One of the jokes poked at the medical profession has been that of operations for non-existent appendicitis. Yet Dieulafoy suggests this procedure when the symptoms indicate merely an affection of the colon or cecum or both, and the appendix is perfectly sound. He describes a dozen cases in which the patient had had his or her appendix removed without affecting in the least the course of the intestinal affection producing the symptoms, and the removed appendix was sound. The slight changes discovered on histologic examination have not the significance usually ascribed to them. The ordinary hypertrophy, the closed follicles in the appendix, has been used to justify the removal of a sound appendix. The hemorrhagic folliculitis chronicled in many cases is merely the result, he states, of the operative injury. Dieulafoy denies that the appendix frequently becomes inflamed as a result of inflammation of the colon and cecum; he believes that the coexistence of true appendicitis and enterocolitis is of the very rarest occurrence. A French physician has collected 22 cases of mucomembranous or gall-stone typhlo-colitis in which the patients came to get relief from a course of the waters, after having been vainly operated on for appendicitis, and their attacks had recurred the same as before the operation. Moreover mucomembranous typhlo-colitis, hysteria, and absinthe intoxication are liable to induce similar syndromes. In one case the patient

had a feverish cold with abdominal pains. McBurney's point was very sensitive, but so was the symmetrical point on the other side, and the course of the case confirmed the diagnosis of "absinthe poisoning" without any actual appendicitis.

The question of abdominal sensitiveness at McBurney's point is a broad problem. Kelling has studied this subject extensively and has reached the following conclusions:

"1. It is desirable that the conditions relating to sensitiveness in the cecal region be investigated much more thoroughly than has been the custom heretofore. This includes sensitiveness of the skin, the muscles, and the deep pelvic structures. 2. The McBurney point is purely a nervous pressure point, the nerves of the appendix corresponding with those of the superjacent abdominal wall. Irritation of the sympathetic plexus in the cecal region causes hyperesthesia in overlying structures. 3. One can determine sensitiveness to pressure in this region, but not appendicitis. 4. Only palpable anatomical examination can determine the diagnosis. For the differential diagnosis between appendicitis and cholecystitis even icterus is not convincing except when unattended by fever. The not infrequent combination of appendicitis and cholelithiasis is produced by the agency of bacteria from the appendix. 5. If an operation is performed for appendicitis the gall-bladder should be inspected, and conversely in an operation for gall-stones the appendix should always be investigated. 6. If there are symptoms of appendiceal or gall-bladder diseases and no corresponding anatomical conditions the diagnosis will be doubtful, but one should act as if appendicitis were present."

Appendicectomy as performed by Robson is described by himself as follows: "An oblique incision of from three to four inches is made about two inches internally to the right anterior superior spine of the ileum down to the aponeurosis of the external oblique, which is then split in the direction of its fibers to an extent equal to the external incision. The fascia over the internal oblique and the internal oblique and the transversalis muscles are split in the direction of their fibers, so as to make a lozenge-shaped opening, with the peritoneum as its floor, when the margins are forcibly stretched. Bleeding points, if any, are tied. The peritoneum is caught up by two pairs of pressure forceps and brought to the surface, when it is incised between the forceps and the opening is increased to the extent of an inch or an inch and a half. Through the opening the cecum is drawn out, the appendix is

located, and any adhesions are separated by the finger; or, if necessary, ligated. As soon as the appendix is brought to the surface any protruded cecum or colon is returned into the abdomen, leaving the appendix and the apex of the cecum protruding through the lozenge-shaped aperture in the abdominal wall. The mesentery of the appendix is seized with pressure forceps and is divided between the forceps and the appendix, a ligature being applied to the stump. If the mesentery is very long, it may have to be ligated in two or even in three portions. The root of the appendix close to the cecum is then seized between the blades of a pair of ordinary Spencer-Wells pressure forceps and crushed, the forceps being taken off and reapplied at right angles in order to make the crushing more complete, so as to leave only the peritoneal coat in the crushed portion. To this crushed base of the appendix, close to the cecum, an ordinary thin catgut ligature is applied and cut short. A purse-string suture is then inserted around the root of the appendix, but not tightened until the appendix has been removed, which is effected by seizing it with the pressure forceps just above the crushed portion and cutting it through between the ligature and the forceps. The ligated stump of the appendix, consisting merely of a little nipple of tissue, is depressed by means of a probe or a pair of Lister's sinus forceps, and the purse-string suture tightened, burying the root of the appendix; another purse-string suture may be applied, this taking up the root of the mesentery so as to make it form an additional cover to the tip of the cecum. The ligature of the crushed stump of the appendix is not absolutely necessary, as the crushing quite seals the lumen of the appendix. The cecum is then returned, the peritoneum closed by circular suture, the inner two muscles fall together, two or three interrupted catgut sutures unite the separated margins of the internal oblique, and then several sutures are in like manner applied to the edges of the aponeurosis of the internal oblique muscle to secure active apposition, after which the skin is united by several interrupted sutures. A dry dressing is applied and left in place for ten days, at which time the patient may be moved to a sofa. The damage to the abdominal wall is so slight that no belt is necessary or even desirable. In acute cases, where the root of the appendix cannot always be safely brought to the surface, crushing the root of the appendix and applying a catgut suture to the stump has been sufficient to insure freedom from a fecal fistula. The operation

can usually be completed in from ten to fifteen minutes. Where the diagnosis is doubtful a vertical incision through the outer part of the rectus sheath is employed, and the muscle displaced inward, when the posterior sheath of the rectus and the peritoneum are divided together in a vertical direction. In this way a free opening can be made, which is large enough to admit the fingers or even the hand without dividing any muscle."

The surgery of the bladder is an advancing field; recently Treplin has reviewed forty-five cases with bladder tumors operated on by Kummel in twenty years. In 32 the tumor was of the villous form, while in 19 it was malignant, and in 6 of these the transformation of an innocent into a malignant growth was probable. Malignant recurrence was found in 3 out of the 12 innocent growths removed. Nine out of ten tumors that did not exhibit villous characteristics were carcinomas, the others being a sarcoma and a large cyst. The treatment consisted of the avoidance of leaving cancer germs behind; hence the bladder wall must be excised into sound tissue, which can be done only by a high incision. Recurrence was observed with only two of the innocent growths; in one case multiple papillomas recurred four times in the course of twelve years. Only 6 of the 30 patients with malignant tumors are still living after an interval of from seven to sixteen years. One of the tumors in these cases was a spindle-celled sarcoma, the others being forms of villous malignant growth. Primary union after resection was favored by the site of the tumors, as they were all in the vertex of the bladder. Two patients were cured for nine and twelve months by resection of half the bladder and detachment of one ureter, but they succumbed later to recurrence. Kummel believes that an operation is indicated in all cases of malignant bladder tumors, for permanent recovery is sometimes possible, and the patient's condition is rendered more endurable under all circumstances.

The curability of hernia at all ages is a live problem; in three years Deanesly performed 142 hernia operations on 130 patients, in twelve operations being performed on both sides. The youngest patient was 3 months, the oldest 70 years; thirty-four patients being under 15 years and eleven over 50 years. Of those under 15, fourteen were infants under 2 years. Excluding strangulated cases, there was only one death from pneumonia in an infant 18 months old after a double operation. Eleven operations were for femoral hernia, the rest being for inguinal hernia. Of the latter,

three were "direct," the remainder of the ordinary oblique variety. In fifteen cases the patients could not be followed after one year, and their condition is unknown; but all were told to present themselves in case of return of the hernia. The rest of the number were communicated with two years after the operation, and of these a few had died, without recurrence, from various causes unconnected with the hernia. Recurrence has occurred in six cases only, in every case less than twelve months after the operation; all six were cases of inguinal hernia, the femoral hernias having been found sound at the end of two years. Of the six relapses, in one case, a woman with a violent chronic cough, a small ventral hernia formed at the upper end of the scar; three were ordinary inguinal herniæ, of moderate size, in healthy young men; while one was a direct inguinal hernia in an elderly man. One was a small inguinal hernia in a boy of 8. This patient was operated on again, and remained free from recurrence fifteen months after the second operation. In all these cases except the first, which was an ordinary ventral hernia, the relapse precisely resembled the original hernia, a new inguinal sac of peritoneum having formed.

Erdmann on the other hand has operated on fifty-eight cases of strangulated hernia in eight years, thirty-one being inguinal hernias, all males, of whom twenty-six recovered. Strangulation in every one of these five fatal cases was at the external abdominal ring. There were nineteen cases of femoral hernia—four in males and fifteen in females. There were three cases of excision of the intestine, two recovering; six cases of umbilical hernia, all females, and one death. Erdmann uses general anesthesia in these cases if the patient has not been vomiting, but in case of vomiting local or spinal anesthesia should be employed. He prefers, however, local anesthesia in all instances as being less likely to cause vomiting and inspiration pneumonia and lessening shock. There is no reason for not allowing the hernial gut to remain in the wound for a number of hours if there is a question as to its viability. If time shows that it is non-viable, a secondary operation with excision and radical cure can be proceeded with; he returns the omentum when not gangrenous unless it is matted together by adhesions or hypertrophied. In excising the omentum he never uses the locked or chain ligature because it puckers up the mass, preferring to take up small sections and make individual ligations, keeping the omentum in its

spreading relationship to the intestine. His records show that the youngest case was a male thirteen days old, no anesthesia, recovery; while the oldest was a female aged 86, femoral hernia, local anesthesia, recovery. The majority of the cases seem to occur during the warm weather, when general relaxation is greatest. Erdmann does not believe in taxis, and his after-treatment is simple. A little rise of temperature, ½ to 1½ degrees, is nothing to be feared, but the dressings should be taken down occasionally so that the wound can receive proper attention. A movement of the bowels is sought for in all non-excision cases the second day, and a light diet given until the temperature becomes normal.

While on this subject it is well to note that Polya has devised a new operation for obliterating the femoral canal by plugging it with the entire thickness of the sartorius muscle. The operation has been performed twice at von Herezel's clinic at Budapest satisfactorily. Thus one of the patients succumbed not long after to an infectious disease, and the autopsy demonstrated perfect anatomic results. The incision is in the shape of a T or inverted L; the saphena is ligated and severed, and the hernial sac tied and buried if possible. The sheath of the sartorius is slit across below the level of the canal, and the sartorius muscle is cut a trifle above this slit; then the proximal stump of the muscle is worked through the saphenous opening above the large vessels and sutured, after being pushed as far into the canal as it can be made to go. Two or three stout catgut threads are passed through Poupart's ligament, the implanted sartorius and the sheath of the pectineus, and the muscle is pulled deep into the femoral canal as the threads are fastened. A flap made by cutting the fascia lata is turned back and sutured to Poupart's ligament, to the sheath of the pectineus, and to the sartorius.

Bannister, a surgeon in the army stationed at Manila, has studied extensively the radical treatment of non-strangulated inguinal hernia. He says in the *Journal of the American Medical Association* that in September, 1895, by order of the War Department on the recommendation of the surgeon-general, the radical operation for hernia was made the routine treatment in the United States army. At that time the whole question was still undecided, and the responsibility of proving the adaptability of the operation to the military service was placed on the pioneer operators of the medical corps of the army. Several hundred

operations for the radical cure of hernia have been performed by the officers of the medical department on the officers and soldiers of the United States army, with the most brilliant results, which have, beyond all cavil, proved the operation to be most admirably suited to the military service. There has been no mortality as far as Bannister has been able to learn in the practice of the surgeons of the army, with the exception of one death which occurred at the General Hospital in Washington, and the rate of relapses, even after the severe hardship and effort consequent on the arduous campaigning which has fallen to the lot of the United States army since 1898, has remained so small as not to merit consideration. Bannister says: "I think I may fairly place my own cases in the neighborhood of 100. In this list there has been no mortality and no wound-infection, except in one case, in which a small abscess developed under the skin after the skin wound had healed per primam. So far as I have been able to trace my cases I have had only three slight relapses, which were no more than slight bulgings at the internal ring. One of these so-called relapses occurred in the case of a cadet at the United States Military Academy, who, after being returned to duty, was sent to hard work of the riding-school too soon after operation."

Coley in the *Annals of Surgery* gives the final results of 1003 operations for the radical cure of inguinal and femoral hernia performed between 1891 and 1902; 937 cases were operations for inguinal and 66 for femoral hernia; of the 937 inguinal cases, 756 were in the male and 181 in the female. From the above list are excluded all cases operated on within six months of the time of the writing of his paper. In this list of 1003 cases there have been two deaths, or adding the operations performed up to May 11, 1903, two deaths in 1075 cases, which would constitute a mortality of one-fifth of 1 per cent. Dr. Coley's first death was due to "ether pneumonia" in a child 6 years of age, and the second fatality occurred in a case of an adult with a large irreducible omental hernia. At the Vienna clinic, according to Dr. Coley's statistics, there were three deaths in 804 operations, while at Johns Hopkins the mortality-rate has been only one death in 459 cases, and at Carle's clinic in Rome there were only two cases of mortality in 400 operations, one being from pneumonia. The danger of a fatal result at the hands of a careful and skilful operator is infinitesimal. In the 937 cases of operation for the radical cure reported by Dr. Coley, 917 were typical Bassini oper-

ations with transplantation of the cord, in which list there were eleven relapses, a rate of 1.2 per cent. In twenty cases in which the cord was not transplanted and which consequently were not regular Bassini operations, six relapses have been observed by Dr. Coley. The Johns Hopkins statistics show that in 307 operations for inguinal hernia by Halsted's method there resulted seven relapses and four cases of weak cicatrices. Counting the latter as relapses, there would be eleven relapses in this list, making a rate of 3.6 per cent.

In a series of 2032 Bassini operations which were published by Matanowitsh, in the practice of various surgeons, there were 74 relapses, a rate of 3.6 per cent; while in 528 cases by Kocher's method there were 19 relapses, 3.8 per cent. In the 1003 operations for inguinal and fermoral hernia, Coley reports 30 cases of suppuration, in only nine of which cases was the suppuration deep, the remaining being limited to stitch-hole abscesses. Prior to March, 1899, when Dr. Coley and his assistants began to use rubber gloves, the cases of suppuration amounted to 4.2 per cent, but since the use of rubber gloves Coley states that he had only five cases of suppuration (one deep and four superficial) in four years in about 400 cases, or 1¼ per cent, while at Halsted's clinic, before rubber gloves were worn, the suppurations amounted to 24.13 per cent. In 226 cases in which gloves were used there were only four suppurations, 1.7 per cent. The above statistics are conclusive, and Bannister feels perfectly justified in claiming that a careful modern operator can easily hold his rate of suppuration close to 1½ per cent. In view of the facts adduced Bannister formulates the following conclusions:

"1. By the methods of Bassini and Halsted, the modern surgeon has at his command two absolutely reliable operations for the radical cure of hernia. 2. With our modern strict aseptic technique the operation is as safe as any in surgery, and the risk of a fatal termination in an operable case is so insignificant as not to be worthy of consideration. 3. The danger of relapse is so remote as to be of no moment in forming a decision with reference to the advisability of an operation in any given case. 4. If the above propositions are true, every operable case of hernia in patients between the ages of 4 and 50 years and without disease of vital organs should be subject to the radical operation, as is the custom of our military service."

SARCOMA OF THE EYELID: OSSEOUS DEGENERATION OF THE EYE: ENUCLEATION OF THE EYE BECAUSE OF INJURY: SARCOMA OF ANTRUM.[1]

BY MARTIN F. COOMES, M.D., LOUISVILLE, KENTUCKY.

It occurred to me that instead of preparing an elaborate paper, it might be of greater practical interest to briefly report three or four cases recently observed. As these cases differ in no essential respect from hundreds of others seen by different specialists in the same line of work, only the outlines will be given.

Case 1.—Eight months ago a boy aged 14 years was accidentally struck on the left upper eyelid by a playmate. Following this injury there was considerable tumefaction, and the lid thereafter never regained its normal condition—*i.e.*, some swelling remained—and later a distinct tumor was noted which occupied the space between the conjunctiva and the skin. This new growth became progressively larger, and when the boy was brought to me two weeks ago it was the size of a small almond.

A provisional diagnosis of sarcoma was made and immediate operative intervention advised. Extirpation of the growth was easily accomplished under local anesthesia. The skin was split just above the enlargement and the tumor was readily "hulled" out; but in doing this it was necessary to remove quite a large section of the conjunctiva. The mucous edges were united by inserting a row of sutures, and the skin was then stitched to the mucous surface so that no dead space was left. The wound healed promptly, and three or four days after the operation the stitches were removed and the boy permitted to go home.

The tumor is presented for inspection. Sections thereof have been submitted to microscopic examination and proven to be small round-celled sarcoma.

Case 2.—The next specimen, an eye which has undergone osseous degeneration, was removed a week ago. The patient, a man aged fifty, thirteen years ago was struck in the eye with a splinter of wood. He gave the customary history of pain, gradual destruction of the eyeball, and loss of vision. The eyeball was enormously distended (staphylomatous), and certain portions have undergone osseous degeneration, as can be plainly observed by examination. Of course under the circumstances there was but one indication, viz., to enucleate the eye, which was done

[1]From proceedings of Louisville Clinical Society.

promptly. This is the third case of the kind that has come under my personal observation. Twenty years ago I removed an eye in which the entire choroidal structure had undergone osseous degeneration.

Case 3.—A blacksmith while attempting to remove the band from a wagon-hub was struck in the eye by a piece of steel. This was late in the evening, and when seen the following morning the whole anterior chamber of the eye was filled with blood. It was impossible to determine whether or not the piece of steel remained in the eye, but it looked as if the eye had been struck a glancing blow, as there was a small incision at the sclerocorneal junction on the temporal side. By means of a large magnet I endeavored to demonstrate the presence or absence of the foreign body, but being unable to gain any information thereby the eye was removed, and it was found that the piece of steel had been driven entirely across from the temporal to the nasal side, lodging in the cornea. The foreign body still remains in the eye, and as will be observed it is wedge-shaped and quite large.

Even had it been possible to extract this piece of steel with the magnet, the eye would have been of no further service, and I believe under the circumstances enucleation was the wisest plan.

Case 4.—A man aged fifty-three, sent to me from the interior of Kentucky, had a small mass protruding from the left nasal cavity; there was also a tumor occupying the entire left side of the mouth, involving the alveolar process from the center back to the angle of the jaw. A physician in the country had punctured the buccal tumor, and since that had already been done I had no hesitation about operating at once. I presumed the growth to be a sarcoma, though the patient did not look like a person the subject of malignant disease, and the tumor itself had the appearance of a simple mucous polyp. Under cocaine the mucous surface was slit through the mouth and the tumor curetted away; the antrum was then invaded and thoroughly curetted, a finger being inserted to be certain that the cavity was clean. Hemorrhage during the operation was very slight. There was one enlarged gland, about the size of a pea, near the angle of the jaw. No other glandular enlargements noted.

An interesting feature in connection with the history of this case is that while it seems clearly established the tumor is malignant, yet the man (who is still under observation) is in good physical condition and presents no other appearance of malignancy. It may seem advisable a little later to administer a gen-

eral anesthetic and clean out the entire mass according to the plan proposed by some English surgeon; but instead of sacrificing the entire maxilla, I shall probably only remove the alveolus and antral floor.

Dr. William Cheatham said his experience had been that where osseous degeneration took place there was greater liability to sympathetic trouble (in the fellow eye) than in other diseases of the eye. He had a specimen showing osseous degeneration of the entire choroid, and had a case under observation in which the eye was shrunken, hard, and he believed osseous degeneration had already taken place. He thought enucleation was wise in the third case reported, since the man depends upon his daily labor for sustenance and could ill afford to lose the other eye. Were he rich it might be different, as he could then afford the time for necessary treatment. He will be able to return to work in a week or ten days, and although he has but one eye can continue to make a living. Had the foreign body been left, the patient would have been away from his work for many weeks, enucleation would eventually have become necessary, and in the meantime sympathetic disease might have involved the fellow eye.

Dr. Samuel G. Dabney thought it unusual for ossification to occur so far forward in the eye as the specimen indicated. Osseous degeneration generally takes place in the choroid, and the text books state it is usually confined to the capillary layers thereof. He also has an interesting specimen of this kind, a shell with a hole in the middle for the optic nerve, which he removed many years ago. The patient had been blind for a long time, and ossification of the choroid was not diagnosed before the operation. There was in that case a little irritation of the fellow eye. He believed there was no question about the propriety of prompt enucleation in the third case mentioned, since the probability was useful vision would have been impossible had the eye been left intact; moreover, it would have been a long and most likely an ultimately unsuccessful fight to attempt to retain the eye. Certainly it is much safer to remove an eye that is beyond light perception, and also containing a foreign body, in which the chances are that vision cannot be improved.

Among the public buildings destroyed by the recent earthquake at Valparaiso are stated to be three hospitals belonging to the British, the American, and the German communities.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE QUESTION OF ACTUALITY IN DETERMINING INSANITY.

The present status of our definition of insanity is far from satisfactory. Reasoning by exclusion, evidence is gradually accumulating to substantiate the belief that the left frontal lobe is the principal seat of the intellectual functions, but this observation applies rather in a physiologic and surgical sense than in establishing a physical basis for insanity. Very elaborate studies of the morbid anatomy of insanity are being made, but thus far only enough data have been collated to confuse the general clinician and no general rules can yet be laid down as to the nature, extent, or location of lesions, as corresponding to the customary functional classification of insanity.

The establishment of insanity from the clinical standpoint must obviously antedate the discovery of lesions in any given case. There is not a regular, not even a usual, involvement of parts of the brain in such a way as to give rise to focalizing symptoms, no physical method of diagnosis can be applied through the skull as can be through the thoracic and abdominal wall, there is no constant or especially suggestive condition of blood, urine, etc., as in many diseases of the viscera of the body cavities. Thus, from the clinical and legal standpoints, the diagnosis of insanity rests upon a very crude observation of "what the patient says," what he does, and how he impresses himself upon his examiners. Any one of these points upon which the diagnosis of insanity rests may be duplicated in hysteria, delirium, excessive weakness, toxic states of various kinds, exogenic or endogenic, dreams, or the border zone between sleeping

and waking. Hallucinations, illusions, and delusions are perfectly compatible with a normal mentality.

It is scarcely necessary to say that the sayings and doings of one suspected of being insane must be considered in their proper relations to each other and to the occasion. It is by no means unnecessary to emphasize the fact that the examiners must also place themselves *en rapport* with the supposed insane patient.

Delusions are based, to a considerable degree, upon hallucinations and illusions. It is a question whether the sharp line between the last two phenomena is properly drawn. May it not be that every so-called hallucination is based on a sensory illusion, as a misconception of some sensory impression, such as a musca volitans, the shadows of the blood corpuscles on the retina, a reflection of light or shadow from a spectacle lens, a distant sound, a faint odor, or, at least, some minute lesion or circulatory inequality in the corresponding sensory center? For instance, a perfectly sane person may waste time in seeking for a cat that he imagines he has glimpsed sneaking through a doorway. The delusion that the cat is in the room is based on a visual impression, indistinct, but not more so than would have been the case if the cat had run into the room and had been seen outside the line of direct vision. Whether the sensory impression is essentially a hallucination or an illusion is a matter of opinion, but it seems more reasonable to suppose that there really was an indistinct impression from without, such as a musca volitans, a shadow cast by some moving object, or a reflection from an eyeglass as the head was turned.

In one case, a patient suffering from some mild affection was reported delirious. On questioning the nurse it was developed that the report was based on a single symptom, namely, that the patient had supposed that she had on cotton gloves when her hands were really bare. The patient explained that while his eyes were closed the nurse had put her hand on his forehead, and he had asked her to take off her gloves and was quite surprised to see that her hands were bare. As a matter of fact, the nurse's hands were somewhat dry and rough, and there may also have been some paresthesia, as the result of autointoxication, the tactile sense in the forehead not being very delicate under any circumstances. At any rate, there was not the slightest reason for considering the patient delirious.

In another instance, a lady under the nervous strain of a death in the house walked with the physician to the gate, and

on looking back imagined that she saw a cat on the porch, with his eyes glaring at her. Although not especially superstitious, she was much affected at the vision. The physician attempted to pacify her, pointing out that it was a plain, ordinary live cat, that had crept up onto the steps, and not to be regarded with superstitious horror. As a matter of fact, excepting that one person was in an abnormal psychic state and the other perfectly normal, both were victims of a delusion based on an illusion. The outline of the cat was simply the shadow of the doctor's hat, and its eyes spots of light due to accidental arrangement of leaves on a tree near an electric lamp. Doubtless most ghosts and apparitions could be explained on quite as commonplace a basis, if investigated.

We have cited these illustrations to call attention to the fact that the existence of a hallucination, an illusion, or a delusion does not necessarily indicate insanity or even delirium or hysteria. Indeed, under ordinary circumstances such sensory misinterpretation as can be designated either hallucination or illusion practically always leads to a delusion. Thus, instead of considering the insane delusion to be based on hallucination or illusion, it is more characteristically a primary condition, favoring the occurrence of hallucination and illusions.

It is impossible to distinguish sharply between lack of logic, hysteria, or delirium on the one hand and genuine insanity on the other. But it is of practical importance to distinguish the insane delusion from that which is simply due to good logic based on false premises or that which is due to illogical reasoning commonly recognized as compatible with mental health, though of course indicating a low grade of mental strength. In plain terms, it may be said that the insane delusion is unreasonable and bizarre, and not explicable on the ground of false premises. Yet this statement is vague and unsatisfactory, not only academically but for the extremely practical reason that it does not afford a criterion for differentiating insane from sane delusions.

Especially in general paresis the early delusions are apt to seem perfectly logical, at least on superficial examination, and, in particular, delusions of grandeur or persecution are often plausible. Thus the patient may, unhindered, wreck his fortune, or kill an entirely innocent person, before the insane nature of the delusions is recognized. In one instance the delusion of grandeur consisted in the conception that the patient was to

become a turnip king and make a large fortune by controlling the market in this commodity. In and of itself this delusion is no more insane than the scheme to amass wealth from controlling the market of celery or sugar beets. In one instance a physician had a tenant who put off the payment of rent on the excuse that she had a considerable sum of money due her for literary work. He was much chagrined to learn that she was committed to the insane asylum and that her literary prowess was entirely of the nature of a delusion. And yet, on a slight acquaintance, there was nothing improbable in the woman's claim. As an instance of the narrow line between delusions of persecution and sane though excessive indignation at real wrongs may be instanced the case of a bankrupt merchant who shot his lawyer and committed suicide. Not to discuss the opinion of some that no insane person commits suicide, it may be said that examination of the facts of this case showed that the lawyer richly deserved his fate, and that there was nothing to warrant the diagnosis of insanity excepting in the sense that any criminal act may be said to indicate lack of mental balance.

The assumption of highly improbable qualities may be considered evidence of insanity. For instance, a patient, obviously insane, boasted of having royal blood in her veins. One of the examiners wished to include this as proof of insanity; the other, having in mind several acquaintances in rather humble circumstances who actually did have such descent, insisted on investigating the statement impartially. Out in the country we happen to know a rather bibulous individual of about the age at which paresis is common, who answers to the name of Bill and whose ordinary toilet consists of a collarless shirt and an old pair of trousers supported by a single "gallus." Suppose that this old man should develop symptoms of insanity, and at the examination should insist on being addressed as "Sir William;" nine physicians out of ten would set this down as an insane delusion of grandeur. Yet the fact is that it was entirely within his power, at one time, to be "Sir William" indeed, by conforming with certain purely technical requirements.

The assumption of supernatural power might be considered as offhand evidence of insanity; yet Dowie, who claims to be the reincarnation of Elijah, and Jemima Wilkinson, who pretended to be the Christ returned, and Joseph Smith, not to mention a host of others in the history of bizarre religious sects, were

shrewd leaders of men, who could be pronounced insane according to no practical standards. Nor can it be asserted that, in all cases, these claimants of supernatural authority were deliberately imposing upon their disciples. It is a long step from the Christian minister who believes that he is called to do a divine task to the founder of a community who considers himself divinely commissioned, perhaps reincarnated for the establishment of a new brand of religion, but it may be an equally long step to the filthy lunatic with the delusion that he is an apostle or one of the Trinity.

Thus we feel warranted in emphasizing the belief that there is scarcely a single delusion which, in and of itself, can be considered an indication of insanity. False logic, good logic from false impressions, ignorance of scientific fact, superstition, extreme religious views, credulity of various kinds, however indicative of a mentality below the ideal standard, do not indicate insanity, and any conclusions as to insanity based upon delusions must depend upon the detection of peculiar, abnormal mental processes. To accomplish this the examiner must get at the actual facts of the case, he must view the environment of the suspected insane patient from the same point of view as the latter, but with normal mental vision. In doing so he will find that some phenomena that appear to be indications of insanity are not, while conversely what appear on superficial consideration to be correct conceptions may prove to be delusions.

EDITORIAL NOTES.

A Dying Profession.

An interesting commentary on recent progress is shown in a statement recently made by the president of the London Royal College of Veterinary Surgeons, who maintains that in so short a period as three years from the present time there will be employment for only 300 veterinary surgeons in London. Before automobiles were introduced into the English capital 6000 veterinary surgeons were practicing their profession in that city. This is probably the first instance in the world's history where machinery has affected those following a profession; heretofore only the trades were in any way affected by the introduction of some labor-saving device.

ITEMS AND NOTES.

Washington, D. C., is suffering from an epidemic of typhoid fever.

According to the bureau of health of Pittsburg, typhoid fever is increasing in and around that city.

A memorial tablet was recently unveiled at Pavia, Italy, to the memory of the late surgeon, E. Bottini.

Dr. Robert M. O'Reilly, who has served one term as surgeon-general, has been appointed for an additional term of four years.

The Roumanian government has introduced a bill prohibiting the marriage of persons suffering from incurable syphilis, consumption, or epilepsy.

Dr. Lapom, physician to the Pope, is reported to be seriously ill, and it is stated that Dr. Mazzoni has made the diagnosis of inoperable cancer of the stomach.

The number of students on the books of the Imperial University of Tokyo in the academic year 1905-6 was 4517. Of these 641 belonged to the Faculty of Medicine.

It is announced by an exchange that $31,006 has been raised for the erection of a Roman Catholic hospital in Waterbury, Connecticut, and that the site for the institution has been purchased.

The International Conference on Tuberculosis was, by invitation of the Netherlands Association for the Prevention of Tuberculosis, held this year at The Hague, on September 6th, 7th, and 8th.

Dr. Pollitz, physician to the lunatic department of the public prison in Munster, Prussia, has been appointed governor of the prison. This is said to be the first appointment of the kind in Germany.

The Semmelweis memorial, which has been erected in the Elizabeth square of Budapest, was unveiled on September 30th. The ceremony was begun at 10.30 A.M. with a meeting in the hall of the University of Sciences. The memorial itself was unveiled at midday.

THE Austrian Ministry of Education has issued an order establishing a service of medical inspectors for elementary schools. They are to look after the health of the children, and note their development. The remuneration is at the rate of 40 crowns a year for each class.

THE regulations of the Victoria (Australia) board of health with regard to the labeling of secret remedies containing poisons will, says an exchange, go into effect January 1, 1907, instead of October, 1906, in order to give British and American manufacturers time to comply with the new requirements.

THE birth rate of Paris continues to shrink, according to the latest report of the health authorities. There have been fewer births this year than last in every arrondissement except two, including one where the population is growing at the rate of 3000 annually. One shows 400 fewer births than two years ago.

THE Chicago health department has noticed, says an exchange, a serious increase in typhoid fever, due it is believed to milk contaminated by polluted water, used in washing the cans and other receptacles. The department has closed one infected milk depot and has excluded the milk from two dairy farms, pending examination.

THE American Surgical Trade Association announces that at a meeting held in Philadelphia, June, 1906, it was resolved that in order to secure uniformity, after January 1, 1907, the trade adopt the French scale for all catheters, bougies, and sounds. Physicians are requested after that date to use only the French scale in ordering such articles.

AT the annual meeting of the Wayne County Medical Society, the following officers were elected and installed: President, J. Henry Carstens; vice-president, Dr. William F. Metcalf; secretary and treasurer, Walter D. Ford; and directors, Dr. Frank B. Tibbals, Guy L. Kiefer, H. Wellington Yates, George W. Wagner, and Louis J. Hirschmann.

THE health commissioner of New York, Dr. Thomas Darlington, has organized a series of shows, to be held in parks and public recreation places, in which the ravages of tuberculosis and the methods of combating it will be interspersed with the ordinary stereopticon views. The shows will be under the direction of Dr. John S. Billings, Jr., and Dr. B. H. Walters.

The Latin-American Medical Congress will be held at Montevideo, Uruguay, in January, 1907. In connection with the Congress there will be an exhibition of surgical instruments, chemical and pharmaceutical preparations, etc.

On the afternoon of Tuesday, September 25th, in the presence of one of the most illustrious gatherings ever assembled in Boston, the superb buildings of the new Harvard Medical School, near the Fenway, were dedicated with imposing ceremonies.

The Eighth Congress of Hydrology and Climatology was held at Milan from October 3d to 6th. Among the subjects proposed for teaching were the inclusion in the medical curriculum of teaching on hydrology and climatology; the origin and classification of mineral waters; the characters which so-called table waters should have as compared with mineral waters; the exportation of mineral waters.

It is rumored, says an exchange, that von Leyden and Olshausen intend to retire from the medical faculty at Berlin University. E. v. Bergmann will also give up further teaching this fall when he passes his seventieth birthday, and W. Erb, of Heidelberg, will retire at the close of the winter semester. These men are all doing good work and do not feel their encroaching age, but they say they want to make room for the younger men.

Among the members of the medical profession in foreign countries who have recently died are Dr. Oswald Vierorft, Professor of Internal Medicine and Director of the University Poliklinik at Heidelberg, aged 50; Dr. Jaumes, some time Professor of Forensic Medicine and Toxicology in the Medical Faculty of Montpellier; and Dr. Frederick Escanye, formerly member of the French Chamber of Deputies for the Eastern Pyrenees, aged 73.

After the opening of the Institute of Cancer Research at Heidelberg on September 25th, an International Conference on Cancer was held at Frankfort-on-the-Main on September 26th and 27th. The Imperial Chancellor, Count von Posadowsky, was represented, and official representatives were sent by the Imperial Health Bureau, the Prussian Cutusminister, the Bavarian, Saxon, Wurtemberg, and Baden Ministers of the Interior, and the Senate of Bremen. Many scientific notabilities, German and foreign, were present.

The deaths of the following eminent foreign medical men are announced: Dr. Castiaux, professor of forensic medicine in the University of Lille; Dr. A. Vincent, formerly professor of hygiene in the University of Geneva, and vice-president of the International Conference on the Revision of the Geneva Convention; Dr. A. Kilarevski, formerly professor of medical physics in the University of Kieff; Dr. A. Peride, professor of anatomy in the University of Jassy.

Reports on the health of laborers on the Panama Canal reveal the interesting fact that the sanitary measures adopted for the improvement of the health of the employees have not proved advantageous to the West Indian negroes. They have always been accustomed to sleep in close, unventilated apartments for the purpose of avoiding the night air, which they consider dangerous. The new barracks for laborers admit of very free ventilation night and day, and the result has been that these negroes have been exposed to the night air, and the mortality from pneumonia has been excessive.

It would appear from the *Pharmaceutical Journal* that the French Minister of Public Instruction is endeavoring to establish certain definite abbreviations in the names of weights and measures when they are not written in full. These are, for measures of capacity: kilolitre, kl.; hectolitre, hl.; decalitre, dal.; litre, l.; decilitre, dl.; centilitre, cl.; and millilitre, ml. For measures of mass and weight: tonne, h.; quintal metrique, q.; kilogramme, kg.; hectogramme, hg.; decagramme, dag.; gramme, g.; decigramme, dg.; centigramme, cg.; and milligramme, mg. Abbreviations are also authorized for measures of length, area, and bulk.

According to the *New York Tribune* of September 23d, advices from Constantinople state that the new American Hospital and Training School for Nurses, just established there under the direction of Dr. Thomas Spees Carrington, of New York City, surgeon in charge, has been burned to the ground on the eve of its formal opening. Occupants for nearly every bed in the new institution were waiting for entrance, and a large number of surgical cases had been booked when the disaster occurred. Fortunately no patients had been placed in the building, owing to the necessity for a few finishing touches to the interior. The exact loss is not as yet known, but is believed to be about $10,000, part of which is covered by insurance.

The Executive Committee having charge of the collection of the sum of $25,000, the income of which is to be paid to the widow of the late Major Walter Reed, U. S. A., and the principal to be reserved for a permanent memorial in the city of Washington in commemoration of his services to mankind in investigating the transmission of yellow fever, announces that the amount now subscribed is somewhat over $16,000. To complete the fund and cover incidental expenses, including a marble bust of Major Reed, $10,000 is needed. The desire of the committee is to close the subscription before the end of this month. Communications should be addressed to the secretary, Gen. Calvin DeWitt, U. S. A., No. 1707 Twenty-first Street, N. W., Washington, D. C.

In November, 1904, there was held in Paris, under the auspices of the Société Française d'Hygiene, an international congress for the consideration of the sanitary condition of dwellings. The outcome of this gathering was the formation of an international association for the promotion of hygiene and salubrity in dwellings. The second congress of the association was held in Geneva from September 4th to 8th, and was attended by about 250 foreign members and nearly as many Geneva residents. Although the majority of those present were from France and Switzerland, the international character of the meeting was maintained by the presence of delegates from Germany, Russia, Spain, Portugal, Japan, China, Austria, and Great Britain. The next congress will be held in Dresden in 1909.

According to the *Army and Navy Journal* of September 22d, the Secretary of the Navy has approved a recommendation of the Bureau of Medicine and Surgery of the navy department that trays filled with formaldehyde solution to hold drinking cups on board vessels of the navy be supplied all ships in commission. The letter of Surgeon-General Rixey on this subject follows: "The bureau believes that the scuttle-butt cup is a common means of transmitting communicable diseases, and recommends that on all ships of the navy this cup be kept submerged when not in use in a solution of formaldehyde (1:2500). The solution is practically tasteless, and will kill all disease germs harmful to man. For the preservation of the health of the men it is considered most desirable that the request of the commanding officer of the *Tennessee,* to have trays placed on the scuttle-butts to hold an antiseptic solution and drinking cups, be complied with."

NEW PUBLICATIONS.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE, AND TOXICOLOGY.

This is the first of a series of four volumes from the pens of R. A. Witthaus and T. C. Becker. In this work the existence of specialists in the various branches of medicolegal science has been recognized for the first time in a treatise in the English language. Each branch has been assigned to a specialist in that subject, or at least to one who has made it a particular study. In the arrangement of the matter the primary division into the three sciences of medical jurisprudence, forensic medicine, and toxicology has been adopted. This volume deals principally with pure medical jurisprudence, while forensic medicine and toixcology will receive great attention in the forthcoming volumes. As medical jurisprudence is a subject about which the average practitioner is wofully ignorant, a careful perusal of this work by two such authorities as Witthaus and Becker will well repay those who undertake it. The work as a whole is practical and authoritative.

Medical Jurisprudence, Forensic Medicine, and Toxicology. By R. A. Witthaus, A.M., M.D., and Tracy C. Becker, A.B., LL.B., with the Collaboration of Numerous Authorities. Second Edition, vol. i. New York: William Wood & Company, 1906.

INTERNATIONAL CLINICS.

This number is essentially the same as those of the preceding series. It contains twenty-five original articles from the pens of prominent medical men both of this country and Europe. All of the contributions are meritorious, containing as they do much valuable information. The volume contains a number of illustrations which are excellent.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelley, A.M., M.D., Philadelphia, U. S. A. Volume II, Sixteenth Series, 1906. Philadelphia and London: J. B. Lippincott Company, 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Treatment of Aneurism by the Intrasaccular Method of Suture.

Ricardo Lozano (*American Medicine,* Sept., 1906) says that the method of intra-aneurismal suture or endoaneurismorrhaphy (Matas) will cure aneurisms as radically as the method of extirpation. The method of suture is exempt from the majority of postoperative complications which usually follow the methods classically recommended for the cure of aneurism and for the control of hemorrhage. The method of suture can be applied to all aneurisms that are surgically accessible in any part of the body, whereas the method of extirpation is not practicable with safety in all regions. The method of intrasaccular suture is the most favorable for the preservation and development of the collateral circulation, as this is not disturbed in any way by suturing the orifices of the blood-vessels inside of the sac. The method of intra-aneurismal suture in aneurisms of the subclavian is of comparatively easy and safe execution, whereas the extirpation of the sac is difficult and dangerous. The suture of the orifices in subclavian aneurism should be preceded always by a prophylactic ligature applied close to the sac on the cardiac side. The method of suture in popliteal aneurisms is simple and easy and only requires for prophylactic hemostasis the application of a circular constrictor on the cardiac side. Great care must be taken, however, not to disturb the perianeurismal structures and especially the vein, which should always be respected. The method of intra-aneurismal suture is the only operative procedure which offers any prospects of radical cure in the treatment of abdominal aortic aneurisms. The extirpation of abdominal aortic aneurisms is impractical; all of the other methods, including ligature, are unreliable, unsafe, and not radical. The technique of endoaneurismorrhaphy as applied to abdominal aortic aneurisms must be modified and improved by securing prophylactic hemostasis without forceps or other methods which would endanger the integrity and vitality of the aortic tunics, especially in dealing with degenerate and calcareous vessels. To obtain the ischemia of the field of operation without disturbing the aorta

from its bed or interfering with its nutrition, I would suggest the use of a compressor, shaped like a crutch, provided with a curved crosspiece at the end of a long aseptible metallic handle. If the crosspiece is made semilunar in shape and is covered with soft rubber, it will ride astride the aorta and compress this vessel against the vertebral column, over its peritoneal covering, without exercising injurious pressure when controlled, by the hand of an assistant, outside of the abdominal cavity. The hemostasis obtained by this simple contrivance has the advantage that it will permit the flow of blood to be reëstablished whenever the operator may desire to test the line of suture in the aneurism and thus enable him to reënforce any leaking or weak points before closing the sac. It is also advisable in future to make a careful preliminary examination of the aorta in the vicinity of the aneurism to determine the condition of its tunics. When marked rigidity from calcareous degeneration exists it will be the part of wisdom to close the cavity without attempting further operative procedures. Prophylactic hemostasis with forceps, if effective, is likely to injure the diseased walls of the vessel and to precipitate a fatal termination by hemorrhage. A provisional ligature for hemostatic purposes is open to the same objection, and if allowed to remain permanently will defeat the purpose of the arteriorrhaphy, as it will surely favor secondary hemorrhage and put out of function a number of collaterals which would be saved by the simple intrasaccular suture. One of the advantages of intra-aneurismal suture over the ligature is that it offers a stronger, more resisting barrier to the blood stream above the line of obliteration and is thus much less liable to secondary hemorrhage than the ligature, which has invariably failed in every case of abdominal aneurism operated by ligation up to the present time.

Appendicitis and Typhlo-colitis.

D. Dieulafoy of Paris in a recent communication to the *British Medical Journal* expresses his opinion that many people suffering merely from attacks of simple mucomembranous typhlocolitis are improperly subjected to an operation for appendicitis which does not exist, and that such mistaken practice is on the increase. The patients in question continue to suffer, and all they have to show as a result of the operation is a cicatrix. Such errors, it is held, would not happen if the practitioner, instead of being guided by a "tendency" diagnosis, took some care, before

assuming the presence of appendicitis, in making himself acquainted with the proper symptoms of this terrible affection. A long experience has convinced the author that the predominance of pain in the right iliac fossa in the course of an attack of typhlocolitis is almost always due to typhlitis and not to appendicitis. A genuine attack of the latter affection should, it is held, conform to quite a special clinical picture. The patient is suddenly attacked when in good health, and usually without any premonitory symptoms. The subject of enterocolitis, on the other hand, has been troubled for months, it may be years, by intestinal disturbances. In this affection there is certainly pain in the right iliac fossa, but this pain is not so localized as in appendicitis, and, moreover, protective muscular contraction and cutaneous hyperesthesia, accompanied by nausea, vomiting, and fever, are not well marked and constant symptoms. Each of the two affections, Dieulafoy holds, has its own distinguishing symptoms, a careful study of which will, we are told, enable the practitioner in a large majority to make a precise diagnosis. Reference is made to eleven instances in his personal knowledge of mucomembranous enterocolitis simulating appendicitis, in which, at the operation, the appendix was found to be sound. In conclusion, the author asserts that he remains a keen partisan of immediate surgical intervention in the treatment of genuine appendicitis.

Perforated Gastric and Duodenal Ulcer.

A. Miles (*Edinburgh Medical Journal,* September, 1906) says that the liability to perforation is as great in the male as in the female. Perforation usually occurs earlier in females. The prognosis is best in early life. There is usually a history of severe indigestion, but rarely of hematemesis. Premonitory symptoms of perforation are occasionally present. No constant factor will account for the rupture of the ulcer. Almost all gastric perforations are on the anterior wall and toward the lesser curvature. The duodenal perforations are almost invariably in its first part and on the anterior wall. There is usually but one perforation. The size of the perforation varies from a pin's head to that of a threepenny piece. Suddenness of onset, overpowering pain, abdominal rigidity, and severe shock are symptoms of perforation. Vomiting is not a common symptom. Percussion gives unreliable information. The seat of maximum pain is a guide for the incision. Apparent improvement is often

very deceptive. Opium is a dangerous remedy, as it masks the symptoms. There is no constant relationship between the ensuing peritonitis and the size of site of the perforation, or any other single factor. The abdomen should be opened as early as possible by a vertical incision. It is seldom necessary to open the stomach to find the perforation. An omental graft should be secured over the line of sutures. Excision of the ulcer is not to be recommended unless it is imperative. If the closure of the ulcer has resulted in serious narrowing of the pylorus gastroenterostomy should be performed, or as an alternative, pyloroplasty. The abdomen should be washed out and the head of the bed raised to favor drainage. Saline injections should be given. After twenty-four hours fluids may be given by mouth. Complicating after conditions are temporary gastric fistula, pneumonia, bronchitis, etc. The sooner the operation is performed after perforation the better the chances of recovery.

Shock.

L. Waite (*Medical Record*, Sept. 8, 1906) states that the phenomena of shock manifest themselves through the tripod of vital forces, the nervous, circulatory, and respiratory systems, and principally in those organs most highly supplied by the sympathetic system. The intensity of physical shock is in traumatism to the solar plexus, the character of the injury, and the severity of the pain produced. The diagnosis of shock is recognition of the clinical phenomena. Practically the only difficulty lies in differentiating this condition from syncope caused by severe hemorrhage. The physician should never be content with a diagnosis of shock until every possibility of hemorrhage has been excluded. As to prognosis, temperature is in general the best guide. A persistence of 96° or below for several hours warrants an unfavorable prognosis. The writer concludes by discussing the treatment of shock

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The Use of Rubber Gloves in Abdominal Operations.

P. E. Taylor (*Practitioner*, September, 1906) mentions three possible extraneous sources of infection during the performance of an abdominal operation: (1) The hands of the surgeon and his assistants. (2) The skin through which the incision must be made. (3) The instruments employed. With rubber gloves

the hands can be covered with an impermeable material which can be sterilized by boiling without interfering with the manipulative dexterity of the surgeon. The outside of the glove should never be subjected to friction from the bare hand in drawing it on. The glove-covered hands should be frequently rinsed during an operation in sterile salt solution, not only when soiled, but in order to keep it moist. If a glove is pricked or torn during an operation, the injury should at once be repaired by a finger-stall, or a fresh pair of gloves should be used. The author thinks that the use of gloves signifies diminished morbidity and complications after abdominal operations, even though the influence upon mortality may not be directly demonstrable.

MEDICINE.

Tuberculous Articular Rheumatism.

Patel and Leriche (*Rev. d'Orthoped.; British Medical Journal,* Sept. 8, 1906) report a typical example of tuberculous articular rheumatism. The patient was a woman, aged 41, with a doubtful history of chest disease in the family. At 31 she had typhoid, and in early life suffered slightly from cervical adenitis and otorrhea. At 24 she was suddenly seized with symptoms of pulmonary phthisis: cough, hemoptysis, night-sweats, wasting, followed by rheumatic pains, with redness, severe pain, and functional impotence, in most of the joints, beginning with the lower extremities, and finally attacking the spinal column. The patient was bedridden for four months, and got no relief from salicylates. Gradually all the symptoms disappeared, the cough being the last to go, and six months later she was completely well, and, except for slight attacks in the fingers, remained well up to ten years ago, when a similar cycle of events took place, only lasting longer, and the cough persisted. Two years ago another attack set in, all the symptoms being more marked this time—several sharp attacks of hemoptysis, signs of breaking down at both apices, marked synovitis, with effusion of the knee-joints, more or less cyanosis, and general ill health. The attack lasted four months and slowly passed off, leaving certain pulmonary signs and symptoms. In the summer of 1902, and in January, 1903, fresh attacks came on, and again in December, 1904, and finally death in November, 1905, from copious hemoptysis. At the autopsy the upper lobes of both lungs were found riddled with cavity, and

there were numerous caseating glands in the mediastinum. All the articulations were examined. The most obvious change was a rarefaction of the cartilage, so that in some places one could almost see the bone underneath. The medulla was a bright carmine-red color, such as one sees in infective conditions. There was no osseous deformity and no ankylosis. Microscopically there was no evidence of osteitis, nor any trace of characteristic tuberculous lesions. The disease must be diagnosed clinically and not pathologically. Of the two types of joint tuberculosis, plastic and hyperostosing or atrophic and medullary, this case is a good example of the second group.

Clinical Study of Vascular Disease.

W. Ewart (*Edinburgh Medical Journal,* September, 1906) says that the study of vascular disease requires a careful elaboration of the elements. A complete and accurate nomenclature is desirable. Uniformity of terminology is imperative since the physiologist, the pathologist, the pathological anatomist, and the clinician must coöperate. More physiology and experimental pathology are required as additions to the pathological anatomy and clinical investigation already contributed. The tendency to merge prevailing divergent types into one title is not conducive to progress. Arteriosclerosis is too large a heading for the practical purposes of clinical definition. A better distinction between the functional arterial diseases and the structural is desirable. It is difficult to distinguish clinically the simulated arteriosclerosis from the true. Separate investigations should be made concerning the capillaries, the arterioles, the sphygmology of the long arteries, and the aorta. Clinical investigations have already been made in connection with the distribution of arterial disease in the various systems of the circulation, in their regional relations to a mechanical and a toxic etiology. The arterial wall offers opportunities for analytical study whcih have not yet been fully worked out.

Heart Block in Practice.

G. A. Gibson at the recent meeting of the British Medical Association (reported in *Medical Record,* Sept. 15, 1906) said that the recent interest in heart block had been one of the most helpful things for the study of cardiac disease ever secured. He

had had one very characteristic case, in which the autopsy showed how thoroughly well grounded was the pathology of this little bundle of muscle fiber, so important for heart action. In this case the clinical symptoms had been typical, and after death the bundle of His was found paler than normal, even to the naked eye, though all other parts of the heart seemed perfectly healthy. This bank of muscle was seared with fibrous tissue and the striations of it were much less than normal. The jugular and radial pulses when compared during life by means of careful tracings had shown a complete divorce of the ventricle and auricle in action. Dr. Gibson demonstrated specimens from the case, showing the heart muscle fibers absolutely healthy within a millimeter of the bundle of His, though the bundle itself had many pathological changes. The vagus in cross-section and in longitudinal section was perfectly healthy. In this case there was no history of specific infection, though some thickening on the anterior portion of the liver gave rise to the suspicion that possibly there had been an old syphilitic infection. Dr. Gibson said that the study of the heart block and the disturbance of heart rhythm from the standpoint of recent advances in knowledge were sure to be productive of most beneficial reuslts.

The Estimation of the Functional Value of the Kidneys.

J. W. T. Walker (*The Practitioner,* September, 1906) quotes the following as Albanan's conclusions: 1. Careful examination shows that the two kidneys produce a different quantity of urine, and that the concentration of each kidney in urea, chlorides, and phosphoric acid is in inverse ratio to the quantity. 2. In twenty-five per cent of all cases the urea shows a difference of concentration of one gramme per litre, and it may be exceeded 6.5 grammes. 3. In a third of all cases the difference between the chlorides exceeds fifty centigrammes per litre and may reach five grammes. 4. When one compares two successive examinations of each kidney collected during the same space of time the differences are found to diminish. 5. In the same time there is compensation between the two kidneys by the increased concentration of the less abundant urine. 6. In successive periods of time the concentration is more complete, and is made up by the concentration and the quantity of the fluid, or by one of these factors alone. 7. The function of the kidneys is more equal when it is compared over a long space of time. 8. Any comparative

examination of the two kidneys, in which the urine was collected during a less time than an hour, is not sufficient to estimate, even with considerable differences, a real comparative value of the two glands.

Foreign Bodies in Stomach and Intestines.

Weissbart (*Münchener Med. Wochenschrift,* 15, 1906) cites a case which was diagnosed as gall-stones impacted in the duct and enlargement of the gall-bladder. A severe colic accompanied the condition, which was not relieved by morphine; the history was that of long preceding gall-stone and kidney-stone colics, and there was also a family history of gout. Suddenly the patient experienced relief from all her pain, and on examination of the stools a piece of bone was found about 3.5 centimeters long and 1 centimeter diameter. The patient did not remember swallowing the bone, which had evidently become impacted in the duodenum.

Etiology of Hematuria.

Vogel (*Berliner klin. Wochenschrift,* 16, 1906) classes amongst the causes of this condition tumors, abscesses, hypertrophy of the prostate, and impairment of the circulation due to pregnancy. A case came under his observation of a young, healthy primipara who suddenly evidenced a severe hemorrhage from the bladder at the seventh month; the urine was normal as regards quantity and specific gravity and cleared up on standing. Rest in bed had no effect on the condition; the patient was allowed to exercise moderately in order to favor the circulation in the limbs and pelvis, and the hemorrhage disappeared.

Observations upon the Form of the Red Blood Corpuscle in Man.

Henry E. Radasch (*American Journal of the Medical Sciences,* May, 1906) concludes that the majority, if not all, of the circulating cells are bell-shaped, and not biconcave. Their presence in the adult body, as well as that of the fetus, is shown by a study of the placenta. Their presence in the fetus and infant seems undoubted, as shown by their abundance and uniformity in shape and size in the fixed tissues. Upon contact with the air

the bell-shape is changed to the biconcave, the result of collapse. This is shown by the fixation of blood that has not been exposed to the air, on the one hand, and blood that has been exposed, on the other.

Cerebral Complications Secondary to Nasal Disease.

Robert H. Craig (*Montreal Medical Journal,* August, 1906) urges the advisability of examining the nose and nasopharynx in all cases in which meningeal inflammation is suspected; in all cases of headache, particularly where the cause is obscure; in all cases of dizziness, whether or not associated with aural disease, examination of the nares should never be neglected; the necessity of exact clinical and anatomico-pathological observations is pointed out in order to demonstrate meningeal inflammation as secondary to inflammation of the nose, nasopharynx, and pharynx.

THERAPEUTICS.

Therapeutics of Radium.

A. Lehmann (*British Medical Journal,* Sept. 15, 1906) in a paper on the uses of radium in treatment first describes the methods by which it may be employed and the effect of its emanations on the healthy tissues and on bacteria, toxins, etc. The emanations of radium, like the *x*-rays, may produce on the normal skin an intense erythema or even ulceration, which latter heals with difficulty. Schultz concludes that radium has a greater action on the vessels and exercises a deeper effect than the *x*-rays, and further, that it is more effective in the treatment of malignant tumors of the skin. The growth of bacterial cultures has been arrested by exposure to radium emanations, and anthrax bacilli have been killed by an exposure of seventy-one hours to these. Wounds caused by radium cannot be infected, but an infected wound cannot be disinfected by exposure to radium. After considering somewhat in detail the action of radium on the various organs and tissues, the author proceeds to the uses of this method of treatment in diseased conditions. In lupus good results have been obtained, the resulting cicatrix being white, pearly, and smooth. In psoriasis the applications should be of short duration, and cases have been cured after one séance. About the eighth day after the application the diseased patch becomes of a ver-

milion color, and towards the third week the lesion begins to disappear. This treatment is only suitable for multiple small patches. In acne and molluscum contagiosum good results have been obtained. The pains of tabetics and gastric crises have been ameliorated, and sensation has returned to previously anesthetic areas of skin in cases of leprosy. Darier has cured a case of facial paralysis in a few days by the application of radium. In the treatment of malignant tumors by radium the author finds that for two weeks after the commencement of treatment the tumor remains stationary; it then progressively diminishes in size without necrosis taking place. The author refers to several cases of epithelial cancer which were cured by this method and mentions cases of cancer of the larynx, esophagus, and stomach, which were benefited. In trachoma the granulations have rapidly disappeared after being touched every day for from ten to fifteen days with a salt of radium. The author finally urges that this method of therapeutics should be extensively employed, especially as its employment is devoid of many of the difficulties which have to be considered when the *x*-rays are used.

Serum Treatment in Puerperal Fever.

Professor Martin, of Germany, writing to the *Lancet* of recent date, says that of the two modern principles of treating puerperal fever, namely, by surgical methods and by injections of antitoxin, the former is available only in clinics and hospitals, whilst the latter may be carried out by any practitioner. Opinions, however, differ greatly as to the efficacy of serum treatment owing to the want of a satisfactory system of comparing cases. Professor Martin has endeavored to arrive at a definite result by tabulating the incidence of pyrexia in puerperal patients according as they were treated with or without serum. He said that since June 1, 1905, all cases of puerperal fever under his care had been treated by antitoxin, and he compares the cases which occurred from that date till June 1, 1906, with corresponding numbers of the previous year when serum treatment was not yet in use. In the administration of the antitoxin 20 cubic centimeters were injected when the rectal temperature was higher than 38.5° C.; if the temperature was over 38° C. on the following day a second injection and perhaps even a third injection were given. When the temperature did not fall another series of injections was begun on the sixth day. The statistical tables

compiled by Professor Martin show that temperatures from 38.5° to 38.9° were attained in 25.6 per cent of the cases treated without serum and in 28 per cent of those treated with serum; temperatures from 39.5° to 39.9° were attained in 20.5 per cent of those treated without serum and in 24 per cent of those treated with serum; temperatures from 40° to 40.4° were attained in 23.5 per cent of those treated without serum and in 8 per cent of those treated with serum; and temperatures from 40.5° to 41° were attained in 7.6 per cent of those treated without serum and 8 per cent of those treated with serum. Temperatures over 40°, therefore, occurred in 31 per cent of those cases treated without serum, but in only 16 per cent of those treated with it; in the latter the pyrexia was also of shorter duration. Professor Martin therefore recommends that serum treatment should be employed in every case.

Treatment of Wounds.

In the treatment of accidental and operative wounds, writes Credé in the *Münch. Med. Woch.*, No. 24, 1906, the strictest asepsis may fail to prevent germ development and primary or secondary infection. Prophylactic antisepsis should therefore also be employed, and a simple, universally applicable, non-irritant and effective agent is collargol, which he has for ten years used in his division of 225 beds. It is at once taken up by the tissue fluids and circulates through the body, without any local caustic effect.

Thus in cases of trauma, such as complicated fractures with infected wounds, common sequels are necroses, lymphangitic and phlegmonous processes, sepsis, etc., no matter how carefully limb and lesion are cleansed. Here the use of collargol assures reactionless healing, without frequent dressings. Portions of tissue that seem lost regain vitality, and an astoundingly rapid recovery follows. Every injury should be treated by this method of prophylactic antisepsis, for one never knows when an infection is not impending.

After operative procedures, no matter how carefully conducted, the method is equally advantageous. It gives a feeling of absolute security, assuring uneventful recovery; and it simplifies the matter of dressing.

Collargol may be used as a 3-per-cent dusting powder with finely pulverized milk sugar, which is painless and non-irritant and very much cheaper than iodoform. Or a 1-per-cent solution

may be poured into deep wounds, cavities, the bladder, etc., in quantities of 1½ ounces. Or collargol tablets, which effect an especially energetic and sustained disinfection, since they melt very gradually, may be inserted into bullet wounds, into the crannies of a complicated fracture, and even placed on contused brain tissues. They are applied naked or wrapped in sterile gauze. The drug may also be used for syringing, gargling, eye-washes, internally in stomach wounds, and as bougies, suppositories, etc. Argyria can never occur.

Care of Far-advanced Cases of Pulmonary Tuberculosis.

S. G. Bonney (*Boston Medical and Surgical Journal,* Aug. 30, 1906) says that about one case out of every four or five may reasonably be expected to exhibit a pronounced diminution of temperature by the end of a week or ten days. The remaining cases do not show any bad results from its employment, other than those due to the occasional intolerance of the system for the serum of a horse. This so-called reaction, which is independent of the specific nature of the remedy, but common to all other serum preparations, bears no relation to the ultimate results obtained. Some cases show marked improvement in spite of temporary discomfort in the way of chills, fever, urticaria, and painful swelling with stiffness of the joints, while others exhibit no improvement, although there is entire absence of constitutional disturbance. Reaction may take place within twelve hours after the use of the serum, or it may be delayed for six weeks. Occasionally the improvement is delayed indefinitely, until the occurrence of the reaction, following which there may be complete and enduring subsidence of the fever. As a result of the serum the temperature either may subside to normal or may be reduced several degrees, remaining, however, somewhat elevated. He has not been in favor of its continued subcutaneous employment, and has given, as a rule, not over four or five doses at intervals of one or two days and awaited results. During the past nine months he has practiced the tentative administration of the remedy by the rectum for ten or twelve doses before resorting to its hypodermic use, in order to avoid the discomfort which sometimes follows its injection into the tissues. He has seen unquestionably good results attend its use even when streptococci were found in the sputum, and believes that even under such conditions the clinical evidences of a persisting sepsis may sometimes afford, from a humanitarian standpoint, a warrantable basis for its use.

Veratrum Viride.

D. Pesci (*British Gynecological Journal,* August, 1906) has studied the action of veratrum viride in 19 cases—that is to say, in 2 of subacute parenchymatous nephritis with uremia, 4 of chronic parenchymatous nephritis, 2 of chronic plumbism, and 11 of arteriosclerosis. He obtained really good results in only 8, of which 7 were renal processes or complications, and the eighth was one of arteriosclerosis, in which the process was not advanced; there was some amelioration (a decrease in pressure well marked though of short duration) in the others; however, there was little or no good effect, except that diuresis was increased in two of them. Pesci formulates the indications for veratrum viride as follows: (1) In chronic nephritis to prevent and combat uremia and delay heart failure; (2) in chronic plumbism to prevent the colic probably due to spasm of the splanchnic artery; (3) in the primary stages of arteriosclerosis, with the immediate advantage of lowering the blood pressure, and the further benefit of delaying the progress and consequences of the disease.

GYNECOLOGY AND OBSTETRICS.

Vaginal Caesarian Section.

At the meeting of the American Gynecological Association, Prof. Duhrssen, of Germany, summed up the indications for this operation as follows: Vaginal Cæsarian section was indicated when in the case of an imperfectly dilated cervix, which would not permit of dilatation by gentler means, the life of the mother or the child was brought into danger. Also the presence of an operator experienced in vaginal operations was required. Imperfect dilatation of the cervix might be caused by pathological changes in the neighborhood of the lower uterine segment, or danger to the mother and child might arise when the pains had as yet caused insufficient opening of the os. In the first, the case was that of an absolute, while in the second it was that of a relative, obstruction to delivery. The first must be removed because it would lead to danger for the mother and child. In the second the danger was already present, and required the immediate emptying of the uterus. Among the special indications he mentioned that of eclampsia. He first established the principle that on account of the independent nature of eclampsia it was

best, as soon as the diagnosis was made, to empty the uterus by narcosis. Investigations of the last few years, which recognized eclampsia as an intoxication produced by pregnancy, had shown that he was right. He had collected 376 cases of vaginal Cæsarian sections, with 48 deaths, a mortality of 12.7 per cent. This high mortality was not due to the dangers of the operation, but to the serious diseases for which operation was undertaken. This proved that the greater operation, namely, the radical vaginal Cæsarian section, had a lower mortality than the conservative vaginal Cæsarian section. Of 53 cases of extirpation of the uterus after vaginal Cæsarian section, this combination of operations, only five died. This further proved the low mortality of the conservative vaginal Cæsarian section, in clinics where immediate deliveries in cases of eclampsia had been effected according to the author's teachings and directions. Veit had only one death in 33 cases, Bumm only one death in his last 40 cases.

Onset, Duration, and Disappearance of Menstruation.

A. Schaeffer (*British Gynecological Journal,* September, 1906) from the consideration of 10,500 cases concludes that the mean time for the first menstrual period is 15.723 years after birth. The onset of menstruation may normally be expected between the thirteenth and the end of the eighteenth year. The average duration of sexual maturity is 30.83 years; when menstruation is established early (ninth to fourteenth years) it is increased to 35.53 years; on the other hand, it is 31.54 years when the onset is between the fourteenth and eighteenth years, and only 28.38 years when the first catamenia do not come on till the eighteenth year or later. The average age at the menopause is 47.26 years.

Avoidance of Ruptured Perineum.

R. Rudaux (*British Medical Journal,* Aug. 25, 1906) emphasizes the wisdom of disengaging one parietal protuberance after the other from the orifice of the vulva, and of making sure that the occiput is completely free from the pubic arch before allowing the head to extend so as to deliver the face. The necessity of suitable pauses during the expulsive process, so as to profit by the elasticity of the maternal tissues, is insisted on; and, in the case of instrumental delivery, restraining rather than making traction when the suboccipital region has passed under the pubes.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
DETROIT, MICH.
Attending Neurologist to Harper Hospital.

Treatment of Acute Insanity in a General Hospital.

D. R. Brower in the *Journal of the American Medical Association* of July 14, 1906, considers insanity as increasingly frequent and its curability as diminishing, both due to the high tension and rapid pace of the present day.

Dr. Brower claims an experience of thirty years, during which he has at no time been without some insane patients in general hospitals. His treatment has been along the lines laid down by Weir Mitchell for the treatment of neurasthenic cases. Complete isolation from family and friends is secured, with a judiciously selected nurse.

He deplores too free use of hypnotics and avoids those most depressing.

His experience is contrary to that of most practitioners, since he finds that with only the equipment of a general hospital he can best supply those conditions most needed by the acutely insane, and advises this management of such cases rather than their commitment to special hospitals.

Melancholia, the Psychical Expression of Organic Fear.

Melancholia is discussed in an unusual way, to say the least, in the January number (1906) of the *American Journal of Insanity,* by J. W. Wherry, who lays down and defends the following propositions:

1. That there are organic as well as ethical emotions.
2. That the relation of the body to the mind is that of master to servant.
3. That the influence of the brain has been overestimated in the production of abnormal mental states.
4. That the organic emotion of fear has its origin in visceral conditions.
5. That organic fear is a primitive instinct and necessary to the preservation of the individual.
6. That abnormal organic fear is the basis of melancholia.
7. That melancholia is but the expression of abnormal visceral conditions.

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ORIGINAL CONTRIBUTIONS.

PENETRATING BULLET WOUND OF ABDOMEN PASSING THROUGH THE SPLEEN, STOMACH, VERTEBRA, AND SPINAL CORD—LAPAROTOMY AND SUTURE OF STOMACH WOUNDS; RECOVERY—SUBSEQUENT LAMINECTOMY AND REMOVAL OF BULLET FROM SPINAL CORD; RECOVERY.[1]

BY JOHN C. PEGRAM, JR., M.D., PROVIDENCE, R. I.

On July 11, 1904, at 7.45 A.M., Mrs. J. A., twenty years of age, was shot at close range with a 32-caliber revolver, while walking on the street. The bullet entered the left side of the body at the level of the eighth rib. She was immediately taken to the Rhode Island Hospital by the ambulance, in a state of collapse. On admission, physical examination showed a well-developed and fairly well-nourished young woman. The skin and mucous membranes were very pale, the pupils equal and slightly dilated. The heart and lungs were examined hurriedly and found negative. The wound of entrance made by the bullet was found on the left side of the trunk over the eighth rib, in the anterior axillary line, surrounded by an area of burnt and discolored skin, roughly three inches in diameter. The abdomen was tender on palpation. There was no dulness in the flanks, but marked rigidity of the abdominal muscles. There was complete motor paralysis of both lower extremities, though the patient could move both thighs a trifle, probably owing to the ability to use the psoas muscle. Both lower extremities were hyperesthetic; even the weight of the bedclothing being painful, with the exception of an area on the left leg supplied by the fourth lumbar nerve, which was anesthetic. The pulse was rapid and of poor volume

[1]Read before the Rhode Island Medical Society, 1906.

and tension. The bladder was catheterized and normal urine obtained. The patient was taken to the operating-room for operation, which was begun at 9.30 A.M. A vertical incision through the abdominal wall, roughly six inches in length, along the outer border of the left rectus, was made. This wound was later enlarged by a second incision from about its center, running outward and downward and to the left for a distance of about three inches. The muscles of the abdominal wall were separated in the direction of their fibers. The abdominal cavity was full of fresh and clotted blood. The bullet was found to have passed through the lower border of the spleen, the mesocolon, cutting a branch of the splenic artery, from which the hemorrhage had come, and which was still bleeding freely, in and out of the posterior surface of the greater curvature of the stomach, but no opening in the vertebra could be felt. No great amount of stomach contents was found in the abdominal cavity. The bleeding vessel in the mesocolon was tied with catgut. The openings in the stomach wall were closed with a purse-string suture, over which were placed Lembert sutures of black silk. The spleen was not bleeding, and the wound in it was left alone. The abdominal cavity was flushed out with saline solution and a good-sized iodoform gauze drain left in, leading to the rupture in the stomach wall. The bleeding was apparently controlled by ligation of the bleeding artery in the mesocolon. The abdominal wall was closed in layers with black silk. The patient stood the operation well, and was given 1200 cubic centimeters of saline intravenously during the operation. She made a good recovery from the ether. Pulse was rapid but fairly good throughout the night. She had considerable paroxysmal pains in the knees during the night, requiring one-sixth grain of morphine subcutaneously. The day following the operation the anesthesia in the left leg had disappeared.

The second day she complained of numbness in the legs and was able to move the toes. She was very thirsty, and was allowed one drachm of water every hour.

On the fourth day she was allowed one-half ounce of milk every hour.

On the fifth day involuntary micturition appeared for the first time.

On the sixth day a small bed-sore appeared over the sacral area, and she had involuntary bowel movements.

On the seventh day the wick was removed from the abdominal wound, and considerable pus escaped from behind it. Patient

again complained of pain in the legs and also in the bladder region, which seemed to be relieved by frequent catheterization.

On the ninth day a soft egg on toast was added to the diet. There was a moderate amount of pus from the wound. Leucocyte count showed 16,400.

On the tenth day an *x*-ray was taken, being an anteroposterior view of the body. This showed a bullet in the line with the body of the first lumbar vertebra pointing up. Leucocyte count, 17,680. Ability to move the legs was increasing, but the patient did not move the left as well as the right.

On the sixteenth day a second *x*-ray was taken, the light being thrown from the side at a definite angle. This showed a bullet apparently lying in the spinal canal. The pain in the legs extreme. Leucocyte count, 16,200.

On July 30, or nineteen days after the shooting, a laminectomy was performed, with the hope that the removal of the bullet might be followed by relief of her distressing pains, and to a certain extent her paralysis. The patient was placed face downward on the table. An incision about five inches long was made in the median line, between the eleventh dorsal and the fourth lumbar vertebræ. The muscles and fascia were dissected away from the spinous processes and laminæ of the vertebræ on either side. Bleeding was controlled chiefly by packing each side of the spinous processes with gauze for a couple of minutes. With the idea in view of trying to save the long spinous ligament in order not to weaken the back too much, the following operation was planned and carried out: First, the spinous processes of the twelfth dorsal and first and second lumbar vertebræ were split longitudinally, with a thin-bladed saw, down to the laminæ. The supra- and interspinous ligaments were then split longitudinally with a knife, this division making a straight line with the division of the spinous processes. Next, the spinous processes were severed from the laminæ with a heavy wire-cutter, shaped like a blacksmith's tongs. In order now to get at the laminæ and still preserve the ligament so that it could be replaced, I severed each half of the split ligament at opposite ends after the manner of tendon lengthening. These two halves of the ligament, including the halves of three spinous processes, were then turned out on either side and the spinal canal opened in the usual manner. The bullet lay under the lamina of the twelfth dorsal vertebra, in the right posterior quadrant of the spinal cord, which latter must have been traversed by the projectile, and was considerably lacer-

ated. The bullet was easily seen, and removed without further disturbing the cord. A drain of plain gauze was led down to the rent in the meninges, which I made no attempt to close. The two halves of the supraspinous ligament were reapproximated and sutured with black silk, restoring its continuity. The muscle and skin incisions were closed with black silk sutures, leaving a small opening for the drain. The patient stood the operation as well as could be expected. She was put to bed on a Bradford frame, face downward. She made a good recovery from the ether.

On the second day after the laminectomy voluntary control of the tibiales antici was noted to be present, but weak. She moved the right quadriceps and adductors. The same held true of the left side, except that the impulse was weaker and the quadriceps extensor did not respond.

On the third day she complained of itching of the skin of the abdomen and legs, and pain in the left knee.

On the sixth day the sutures were removed from the back, and she was turned onto her back, as she could not bear the stomach position.

On August 18, or thirty-eight days after she was shot, the abdominal wound was entirely healed, but there still persisted a small sinus in the incision in the back. On this day she was sent out-of-doors in a go-cart on a Bradford frame.

On August 22, or the twenty-third day after the laminectomy, a plaster jacket was applied, and the patient was able to go out-of-doors in a wheel-chair for three hours. She was much more comfortable with the jacket on.

On August 31, having been out-of-doors daily since the jacket was applied, she was allowed to go home in the ambulance. She was at this time running a little temperature, but the pain in the legs was the symptom most complained of.

The history since leaving the hospital has been one of gradual convalescence. For the first six weeks after returning home the patient suffered much pain periodically in her knees and legs, with occasional and sometimes frequent pains in her bladder. The bed-sore over the sacrum was very resistant, but finally healed toward the latter part of November. The plaster jacket was removed after it had been on three weeks, because the continual dribbling of urine soaked into the plaster and made it offensive. There has been no complaint of any pain in the back at the site of the laminectomy wound, which healed *per primam,* except for a slight sinus caused by the wick to the spinal cord, which per-

sisted for a number of days and then closed. Since the middle of October, when the patient showed a marked change for the better, convalescence has been rapid. She gained in weight and in ability to move her previously paralyzed muscles, and there has been a gradual subsidence of pain in both legs and bladder. There was noticed at this time also an ability to hold her water for several minutes at a time, but when the desire came the urine was passed before she could dispose of it properly. She was up in a wheel-chair daily. By the first of November she took a few steps each day with a member of her family on each side to support her, and by the first of December she was able to get about on crutches.

On December 18 she took a few steps alone without any support. At the present time she can walk alone, though her muscle power is still too weak for very much exertion. She may be said at this time to have regained almost complete control over her vesical sphincter, though at times this is apt to demand hurried attention. The bowels move, though they usually require enemata.

February 8, 1905, Dr. George L. Shattuck kindly tested the skin sensation of both lower extremities. He found a more or less saddle-shaped area of anesthesia to tactile and temperature sense. This was quite symmetrical, starting on the sacrum behind and curving outward toward the trochanters, and then, turning downward and involving the posterior surface of the thighs as far as the upper border of the popliteal spaces. This area of anesthesia, then, involved the inner part of the thighs, including the labiæ. The whole surface of the left foot, including the ankle, and a narrow strip on the right sole were anesthetic. Everywhere else on both extremities, with the exception of the anterior surface of both thighs as low as the tibial tubercles, sensation was delayed, though present. All muscles of both lower extremities gave the reaction of degeneration. Though sensation was delayed or altogether lost in places and normal in others, there were no sharp lines of demarcation to correspond with the distribution of any one nerve. A transverse myelitis must have been set up by the injury to the cord, caused by the passage through it of the bullet, in order to produce the paralysis of the bladder sphincter, noted for the first time on the fifth day after the injury was received. The recovery from this lesion is of necessity a slow one, but if the patient continues to regain her lost functions at the present rate of progress, I believe we may look for a disappearance of almost all motor and sensory disturbances.

APPENDICITIS.[1]

BY J. LIVELY JOHNSON, M.D., LOUISVILLE, KENTUCKY.

Within the last quarter of a century an old evil in a new guise has assumed the immense proportions of a constant menace to the human race, and until recently the origin of which was lost in obscurity.

This omnipresent, all-pervading evil has baffled the best skill of the medical profession through many decades; but with the dying years of the nineteenth century a new star arose above the horizon which was to lead the wise men of all nations to an elucidation of the mystery. This star is the reflected brightness of the modern surgeon, who with trained thought and unerring skill dissipates the shadows and renders immortal the result of his achievements.

I refer to a disease long considered as distinctly within the province of the general practitioner, but which science and progress have consigned to the domain of surgery—that of appendicitis.

This is an inflammatory condition of the vermiform appendix, and is almost invariably the primary lesion of all those conditions known as typhlitis, perityphlitis, etc., terms no longer implying pathological entities, but which have been justly relegated to obscurity.

It is unnecessary for me to give the location and anatomical construction of the appendix, as with this the student of anatomy is presumably familiar. The function of the appendix is as yet shrouded in mystery, which we have tried in vain to penetrate.

We do know, however, that the appendix varies in length from two and one-half to ten inches, its average extent being about four and one-half inches, and that it is often the seat of a most violent inflammation which demonstrates its presence to the patient in its incipiency by sharp, prickly pains, gradually and rapidly increasing until the agony is intense. This pain is generally situated in the right iliac fossa, at McBurney's point, or on a line drawn from the superior spinous process of the ilium to the umbilicus.

In the normal state, in many instances, the appendix is freely movable, consequently presenting the greatest variety in its situa-

[1]Read before the Kentucky State Medical Association.

tion, this to some extent depending upon its length and the character of its mesenteric attachment.

It has been determined by some surgeons that, in the majority of instances, the appendix lies below and to the inner side of the cecum; notwithstanding this the appendix may be found as a result of adhesions in various other locations.

I have upon more than one occasion found the appendix adherent in the sac of an inguinal hernia. Much depends upon the anatomical and pathological conditions, length, size, and lumen of the appendix. In an examination of two hundred cases by Ferguson, the medium length and size of the appendicular canal was four and one-half inches, with a diameter the size of a No. 9 English sound. In three cases the appendix was one inch in length, and in one no trace of the appendix could be found. In some cases the appendix is completely impervious, and in a great many there is partial obliteration. This condition is more prevalent in old age than in youth. After the age of sixty this pathological condition exists in more than fifty per cent; thus it is that we can often see, from the difference in the length and diameter of the appendix, why it is so frequently the seat of disease.

With a process four and one-half inches in length, and a diameter three-eighths of an inch, and whose lumen in twenty-five per cent of all cases is to some extent obliterated at some point along its course, we are confronted with conditions favorable for a stagnation of its contents, which combined are almost sure in the end to produce an inflammatory condition of the appendix.

Any excitation of the mucous membrane of the appendix causes an abundant outpouring of fluid and rapidly fills the lumen of the appendicular process—the edema and swelling of the mucous membrane in connection with the fluid in the canal tends to narrow and close the lumen at points where duplication of the membrane exists, at Gerlach's valve, and where twists and angles occur.

This condition places the appendix under the greatest strain to relieve itself of its contents; the termination of the case depends upon the contractile powers of its muscular coats to expel its contents before gangrene occurs.

The causes of appendicitis are due to fecal concretions or foreign bodies, such as fish-bones, pins, needles, splinters of wood, etc., but most frequently to the former.

The mechanical obstructions to the lumen of the appendix,

the appendicular concretions and the microbic infection, are quite sufficient to account for all forms of appendicitis.

It is well known that any accumulation in the appendix excites a rapid inflammation of its walls and produces an abscess with or without perforation. What is generally called a catarrhal appendicitis, where only the mucous membrane is involved, is rare; however, if the appendix is removed in the incipiency of the attack the disease may be found limited to the mucosa; but let me impress upon you that by far the great majority of these cases are parietal, involving the entire structure of the diverticulum. In many cases of only a few hours' duration the peritoneal coat is roughened, and adhesions will be found to have taken place to the surrounding tissues.

When an appendix is found to be completely gangrenous, it is an evidence that the obstruction was at its proximal extremity, this form being decidedly more rapid and violent in its course than is the catarrhal variety.

As regards the peritoneum during the course of appendicitis, a partial or circumscribed purulent peritonitis is the most common result. This condition of the parts naturally is accompanied by numerous adhesions, the location of these adhesions depending upon the location of the appendix at the time of its involvement.

The purulent collection consecutive to perforation is more frequently intraperitoneal than otherwise, but when the appendix is situated low down, and the purulent collection is in the smaller pelvis, the collection accumulates between the ilium, rectum, and bladder, and in the female above the vagina; and should perforation take place it is more frequently into the rectum than into the bladder or vagina.

It is well known to the profession that in infancy appendicitis is rare during the first two years; however, several cases are on record, the ages ranging from seven to twenty-two months. This disease is of most frequent occurrence in young and middle-aged people, the two extremes of life being to a great extent exempt from this malady.

Statistics demonstrate to us that the male is much more susceptible to appendicitis than is the female, the proportion being four to one; this can only be explained on the supposition that in the male a too generous diet, producing chronic colitis, and exposure to cold are more frequently observed.

Traumatism is responsible for about ten per cent of the cases of appendicitis, and by this is not meant a blow on the appendix, but overindulgence in eating, causing acute indigestion and

catarrh; also strains from bicycling and similar sports will produce sufficient trauma to give rise to appendicitis.

The most common causes for appendicitis are foreign bodies, stercoreal concretions, and the bacterium coli commune of Escherich. It is said that these bacteria normally inhabit the appendix and are harmless when the appendix is healthy, but become active and potent factors for harm when the appendix is bruised or in an inflammatory state.

In an acute attack the symptoms are pain, vomiting, abdominal tenderness, fever, muscular tension of the belly wall, with either constipation or diarrhea—to a variable extent, depending upon the degree of infection and the course of the disease. The first pain is often deflected to the umbilicus and the right iliac fossa. Prior to the onset of these prominent symptoms the patient may experience, for several hours, a serious indisposition, with constipation, flatulent colic, etc.

On examination the right belly wall is found rigid and very tender, and this is most marked about McBurney's point; there may be moderate fever, with pulse of 100 or less. The patient either recovers, to have an attack at some future time, or rapidly grows worse, the pain becoming agonizing and the general expression of the patient indicating approaching dissolution.

It is not good surgery to attempt to palpate an appendiceal tumor after the first few hours of its existence, as there is danger of rupturing the sac.

I distinctly remember one tragic occasion when, after the patient had been placed upon the table and anesthetized, the surgeon thought it best to more fully determine the extent of the tumor; and it was while palpating the belly that the abscess ruptured and its contents disappeared into the general peritoneal cavity.

The physical condition being fairly good, I find it impossible to believe that, under more careful management, the patient might not have recovered.

I wish to state in this connection that a rupture of an abscess and discharge of the pus into the general peritoneal cavity does not invariably prove fatal, as I recall a case in which the abscess had ruptured some time before the operation and the general peritoneal cavity was found flooded with pus. This patient, contrary to precedent, made an uneventful recovery.

In many instances appendicitis develops suddenly and without premonitory symptoms. In such a case all symptoms are violent from the beginning; however, any case may become suddenly

grave from perforation or gangrene, and is promptly followed by falling of the temperature, hiccough, abdominal distention, pain, rapid and weak pulse. This is known as the fulminating variety of the disease.

Appendicitis may terminate in recovery, death, or in a lowered vitality. In the latter the disease is almost sure to recur, thus becoming what we term a chronic form of appendicitis, the attacks recurring at long or short intervals.

This form of appendicitis is a constant warning to the patient of impending calamity.

It is absolutely impossible to determine within the first few hours whether perforation will take place, but in all cases there is this danger to anticipate.

It should be remembered, however, that in the early stages of every suspected appendicitis, where pain is the most prominent symptom, a careful examination should exclude hepatic colic, renal colic, and acute indigestion; this is done by the location of pain and other symptoms which are generally present.

Janeway has referred to the similarity that may exist between appendicitis with pain in the lumbar region and lumbo-abdominal neuralgia. Gibney has likewise noticed similar conditions existing between appendicitis and coxalgia.

This brings us, gentlemen, to another and to me a much more interesting phase of this subject—I refer to the treatment of appendicitis.

I have not attempted in this paper to advance anything new from a diagnostic standpoint; but if possible to urge upon the profession the necessity of early operative procedures.

Palliative treatment is serviceable only while the symptoms are mild and in their incipiency, consequently it is to be deplored that we often temporize with medicinal agents until too late for the most skilful surgeon to be of service. Being unfavorably impressed with the medical treatment of appendicitis as a means of permanent cure, I shall in this paper confine my remarks to its surgical significance.

I will say, however, under no circumstances should morphine be resorted to in sufficient quantities to completely obscure the pain, as this may mar the symptoms to such an extent that the attending physician may completely overlook the gravity of the attack. Purgatives only augment vomiting, and should be deprecated in the beginning.

Complete rest in bed with cold pack is the safest and best plan of procedure. No purely medical treatment of any worth,

in preventing or even controlling the disease, has yet been discovered by the profession.

In the management of a case of appendicitis, should the condition of the patient at any stage of the disease grow worse, operation is demanded and should be performed at the earliest opportunity.

I believe the surgeon will make few, if any, mistakes if he operates in every case, removing the appendix as soon as possible after a satisfactory diagnosis has been made. I regard this up-to-date, scientific surgery, and the only true type of the art.

I might say that the recurrent form of this malady should be operated upon in every instance, either during the incipiency of the attack, or preferably during the quiescent period between the attacks.

It is useless to state that in every case of the fulminating variety operation should not be delayed longer than is absolutely necessary for the preparation of the patient, as it is well known that in some of these cases gangrene of the appendix has been found in a few hours after the beginning of the attack.

The proper management of the stump of the appendix is an item of considerable importance. The peritoneal coat of the stump may be stitched over its end, or the lumen and the end of the stump may be cauterized, then ligated, and again the stump may be dilated and invaginated into the cecum, and the aperture closed by a purse-string suture inserted one-fourth of an inch from the base of the diverticulum in the serous coats of the cecum, the suture being put in place before the invagination, after which it is drawn taut and tied, the stump of each individual appendix demanding its own treatment.

The great advantages of an early operation are that the patient has not been sapped of his vitality by the ravages of the disease, and the appendix is not found to be extensively involved; this permits its easy removal, and but few if any adhesions, with the assurance of union by first intention, if the operation has been done according to the rules of aseptic surgery, and under no circumstances should any operation be otherwise performed.

I believe the ignorant physician and the daily press are directly and indirectly responsible for more deaths from appendicitis than are all the surgical operations performed in Christendom.

It is a frequent occurrence that through the negligence of the attending physician patients are permitted to suffer and die without the most approved forms of treatment.

Again and again we find the daily press heralding to an inter-

ested world that the late lamented Mr. —— was the victim of an operation for appendicitis; while it is notably true that the innumerable hosts who recover from operations performed for this disease have not the greatness of publicity thrust upon them, and thus it is that the evils of these two factors, working in unison, prove more fatal than all other agents combined, well illustrating the axiom that "the evil surgeons do lives after them, while the good is oft interred with their bones."

Is this not unjust and unscientific in the extreme, both to the profession and to humanity at large?

I believe that appendicitis is strictly a surgical disease and should be treated as such, from its incipience to its final and complete termination.

The idea of temporizing with a case of fulminating appendicitis is both dangerous and absurd.

This statement not only applies to the fulminating form of the disease, but also to milder cases, as they may at any moment become so grave that nothing short of an immediate operation can promise hope to the patient.

SOME SUGGESTIONS ON THE MEDICAL TREATMENT OF GALL-STONES.[1]

BY EDWARD W. GOODENOUGH, B.A., M.D., WATERBURY, CONN.

The surgery of the gall-bladder has made such rapid strides in the last decade that it is easier and more popular to talk about gall-bladder operations than to consider the old, threadbare methods of medical treatment. In the old methods, some of which are already cast aside by many, there is rich ore for those who care to dig. Empiricism is a large word and has been used as a bogie-man until we are ashamed to give a patient medicine without some more cogent reason than the foolish fact that we will get him well. Our old cholagogues do not increase the excretion of bile; therefore we drop all past clinical experience and give nothing in diseases of the gall-bladder unless it be more bile and wait for the water to move. I write this article because I find many physicians with a large clientele who use only symptomatic treatment for biliary colic, and for the cholelithiasis or cholangitis no treatment at all. It is not my purpose to exhaust the possibilities of medical treatment in biliary colic and its

[1]Read before Connecticut State Medical Society.

sequelæ, but only to state methods which in my own practice have relieved the immediate attacks and increased the interval between the acute exacerbations.

The disease we are considering is very prevalent in this country and in Europe. Naunyn says that perhaps every fourth elderly woman has gall-stones. Out of five thousand post-mortem examinations they were present in 5.9 per cent of those over sixty years of age. A large number of these cases had never given symptoms of gall-bladder disease, and the diagnosis of this condition was not made until after death. The .r-ray has thus far proved disappointing as an element in diagnosis. I suppose with improved technique or with more thorough mastery of the sense of touch we could find all these cases and remove the stones by operation. Some surgeons say there is but one treatment for gall-stones, and that operative. We could have operations galore; our now overcrowded hospitals would need to be multiplied many times and we would need a special course on gall-bladder surgery in every medical school. It is generally stated that four per cent of those who have gall-stones have acute symptoms. Some surgeons say the pain is caused by gall-stones, therefore let us operate at once and remove the cause—the stones. This is short-sighted, to say the least. The removal of the stones or even the gall-bladder does not always remove even the pain; and sometimes leaves a condition just as disagreeable and more persistent than the previous infrequent attacks of biliary colic. But gall-stones often disappear under medical treatment without operation. Not only that, but many people live for years with a gall-sac full of pebbles and never give them a thought. There are no symptoms, and in spite of the pathological condition present the patient remains healthy to a good old age.

Our patients come to us for the relief of symptoms. Our first duty is to alleviate the pain or discomfort from which they are suffering. Our next duty is to find and remove the cause, in order, if possible, to prevent future attacks. Our first search, then, after the attack of pain is relieved, is not to find whether a cholecystotomy or cholecystectomy, or a cholecystenterostomy, will be the safest and sanest operation; it is to find what caused the stones to form or the duct to close in the individual case; to remove this etiological factor, or these etiological factors, as the case may be, and then, if the attacks continue or increase in frequency, and no relief can be obtained otherwise, let us thank

those surgeons who have simplified gall-bladder operations and allow those cases which need surgical intervention to pass through the cutting stage.

Mayo Robson has given us a valuable treatise on gall-stones. He is a brilliant expounder of gall-bladder surgery: but all surgeons are not Mayo Robsons. His lecture last year on the functions of the appendix shows clearly that nature in providing for the human economy is not such a poor artist after all. Just as truly has the gall-sac with its mucous glands a part to fulfil in normal body life; and even were it but a bag for the storage of an excretion, it should never be removed until its possibility of functionating is entirely lost, and by reason of suppuration, peritoneal adhesions, or rupture, it has become a greater menace to life than the operation which would accomplish its removal. No man on the faculty of the Medical Department of Yale University is held by its graduates in higher esteem or affection than the professor of surgery, now our honored president—Dr. Carmalt. But all surgeons are not Carmalts.

Within a generation Dr. —— was professor of surgery in a western college, so-called. His instruction to his students was: "In operating never mind your anatomy. Cut, and if you cut anything you ought not to, tie it." This eminent surgeon was sent for from far and near in difficult cases. At one time he had a record, vouched for by an honest man, of thirty laparotomies with thirty deaths, a percentage rarely equaled and never excelled. The good man has gone to his reward, but some of his descendants still remain.

It is true that the surgeon as well as the pathologist has greatly increased our knowledge of the diseased conditions surrounding the gall-bladder and its ducts. It is true that a stone in the common duct is apt to lodge at its narrowest portion opposite the ampulla of Vater. It is further true that a serious injury to the pancreatic duct might be more harmful to life or to the comfort of the living than a dozen operations on the common duct or gall-bladder. It is further true that the longer we wait, if operation is necessary or desirable, the greater the danger that peritoneal adhesions, pus, degenerated cyst or duct wall will render the operation useless because of death or the continuance of serious symptoms impossible to remove. But what of those who might have been alive and well without operations who are now dead, or worse, hopeless, helpless invalids? What of those who will not be operated on, but who must go to quacks or certain

specialists for relief which we can as well at least try to give them? What of the poor patient of the country practitioner who has no money or no place for private operation and who cannot get into the overcrowded city hospitals, and who lives where no surgeon is fitted to give the reasonable chance? During our lifetime all of us will have cases of cholelithiasis which ought not to be operated on. This is preëminently a disease of old age, and many men and women with diseased kidneys or arteries will run less risk with the gall-stones than with operation with the best surgeons. Let us consider what can be done for such persons.

For the attack of biliary colic, after the first symptoms, which call our attention to gall-stones, there are three drugs universally recognized as applicable, and one or all may be necessary. When the pain is severe, whether caused by mucus in the ducts or by a stone, morphine 1/6 to ½ grain with 1/100 to 1/60 grain atropine sulphate usually gives relief. The amount of morphine should be as small as possible to quiet the pain. In one case I gave 1¾ grains of morphine during two hours; but when the pain ceased the collapse for twenty-four hours was such that I never shall repeat the experiment. Chloroform given as in childbirth often aids in the expulsion of the stone and allows the minimum dose of morphine. I cannot too strongly emphasize the necessity of never allowing the patient a hypodermic syringe. I have had one morphine habitué on my hands, and she already had a syringe when I first prescribed for her. After eight years of taking from two to six grains she went to Dr. T. D. Crothers and returned cured.

In her case and in all others under my care I have given olive oil in tumblerful doses at the time of the acute attack. This has been true since the first year of my practice, when I tried to do without it. None of the patients love it, but if the physician uses a little brandy or peppermint on the top of the tumbler of oil to disguise the taste, and considerable moral suasion to assure of its being swallowed and retained, it is seldom vomited. With this treatment the bowels always move naturally within twelve hours.

Olive oil soothes the inflamed colon when given as an enema in chronic constipation. It softens the feces, and in mucous colitis gradually gets the intestinal glands and mucous membrane into a healthy condition. For burns and destruction of tissue in the mouth or vagina, or for abraded skin surfaces, oils are soothing and aid in repair. Knowing these facts many old-fashioned practitioners used sweet oil in generous doses in cholecystitis. They

found that in most cases the oil was retained; that vomiting and the antiperistaltic flow of bile into the stomach was stopped. Where the duodenum was inflamed and the common duct was blocked with mucus, the duct was easily opened and the frequently following jaundice was checked. They also found that where the obstruction was caused by stones in the common or cystic duct, the spasm was lessened and the stones were more easily removed. They further found that the drying up of secretions caused by the use of morphine and subsequent constipation and gastroenteritis were lessened or altogether done away with. Finding these facts from observation, as I have done many times, and as you may do if you choose, these empirics of the last century said olive oil was valuable in opening the bile-ducts when closed from any cause, and they used it.

Mayo Robson has tried olive oil a number of times with no effect. J. H. Keay has taken it and given it to others, but to him it is distasteful and he is somewhat skeptical as to its benefit. He insists, however, that it is rational treatment, and quotes Dr. Paul Cohnheim, who, at the International Medical Congress in 1900, said he found that cases of dilatation of the stomach dependent not on an organic obstacle, but on spasm of the pylorus following the ulcer or fissure, or on a cicatrix at the outlet of the stomach, were markedly improved by large doses of olive oil; that stenosis of the pylorus and duodenum, characterized by continuous secretions, and pyloric spasm after the principal meals, were improved or completely cured, and that in ulceration the oil acted as a narcotic. Such results are strongly suggestive of the fact that olive oil may be useful in relieving spasm of the bile-ducts and allowing a stone to pass more readily and with less pain.

I have given this olive oil in six- and eight-ounce doses some fifty times. Very seldom was there vomiting of the oil or disagreeable eructations of gas. I give it only at the time of an acute attack. When the attack is prolonged, with daily exacerbations for one or two weeks, I have repeated the oil every third day. I firmly believe it to be, as Keay suggests, an antispasmodic material aiding in the removal of either stones or mucus from the common duct. Because of the stimulation of the mucous glands in the gall-cyst, with a dilated gall-bladder, it might increase the danger of rupture, but I used it in one case where the bladder was as large as my two fists and with the happiest results. However, if it does nothing but wash out the bowels, as in my

experience it invariably does, its use in the attacks more than compensates for any disagreeable qualities. It must always be remembered that fear checks the biliary excretions, and faith in the usefulness of this remedy on the part of the attending physician goes a long way towards the aid desired.

Olive oil is valuable then: 1st, as an efficient laxative, thus preventing intestinal stasis and the accompanying autointoxication; 2d, as an antispasmodic, assisting the chloroform in dilating the ducts; 3d, as a stimulant to the mucous glands of the gall-bladder, thus rendering the bile more fluid. These are reasons enough for its use during the acute attack of biliary colic. Believe in it and use it and you will get results. Remember, however, that it is not a panacea; that it is only for the attacks, and that in the interim other remedies are more valuable and less disagreeable.

For the collapse sometimes present during an acute attack, strychnia is sometimes necessary.

After the acute symptoms have subsided and the bowels have moved, sodium salicylate in doses of ten grains every four hours, or aspirin in the same doses, relieves the soreness, usually very rapidly. Dry cups over the right hypochondrium have been more valuable in many cases than any other form of counter-irritation.

Diet must be very simple until the acute symptoms are gone —better largely nitrogenous. I give beef-tea, beef peptones in sherry wine, somatose, and milk, with two or three carbonated waters, limiting fats, sugars, and starches until partial or normal biliary flow is restored. Salines, preferably sodium salts, should be given in sufficient quantity to keep the intestines free from toxic and fermenting materials.

When the acute stage has passed it is necessary to study each individual case. We must find the cause of the gall-stone production and remove as far as possible every source of irritation or of pressure on the bile-ducts. It is impossible in the length of time allowed me to discuss all the symptoms of stone irritation or all the causes leading to their formation.

Any food which is not easily digested and absorbed causes autointoxication. This increases the pressure in the intestines by the gases formed, or increases the work of the liver in its effort to destroy poisons and remove them from the body. Many of the sufferers have been adding fat rapidly. For these an excess of sugars and starches is undesirable. Women must les-

sen or entirely remove the pressure of corset or bands about the waist.

The sluggish circulation of advanced age increases the pressure in the portal system. This is undoubtedly a factor in gall-stone production. A duodenum filled with gas and food which pass but slowly through the gut not only is a feeding ground for more pathogenic bacteria, but the intraintestinal pressure must of itself dam up the common duct and allow the bacteria to more readily pass against the bile current. More cholesterin and lime are also formed by the irritated and congested duct and gall-bladder epithelium, furnishing extra stone material.

Calomel and podophyllin and rhubarb are not cholagogues as we once considered them. Their best action is in the prevention of fermentation and autoinfection. In some cases for such action their use is desirable. Carlsbad salts, care in diet, and moderate exercise have proven solid anchors to the windward.

Ox-gall seems to increase the amount of cholesterin and to hinder rather than aid the removal of cholelithiasis. It does not increase the quality of bile, but the increase is too great in cholesterin and lime, too little in their solvents and diluents. As I have said before, I do not use olive oil between the attacks, and except in emaciated subjects have no especial sympathy with half-ounce doses of sweet oil, three times a day, given indefinitely. It requires severe and repeated pain to make most patients follow strict medication, especially where it means sodium salts of any kind in solution. Patience, study, and perseverance will conquer, but we must expend the effort to get the results. Where I have used sodium succinate, as recommended by W. F. Waugh and Solis-Cohen, with an accompanying purgative when indicated, and sodium salts once a week, I have had no further attacks of biliary colic, but as my experience with this treatment covers but a year, I can only say thus far I have no fault to find.

Sedentary occupations play their part in this condition, and moderate exercise, either active or passive, is necessary. Massage is valuable when directed toward the reduction of abdominal fat and the increase of the tone of the intestines—not necessarily directed toward the gall-bladder itself. Stones quiescent in the gall-bladder do no harm in a large percentage of cases.

It is true that if every case of cholelithiasis is operated on the mortality of the particular operation will be very much reduced. This makes much pleasanter statistics for the individual surgeon. Except as the individual skill of the operator increases with the

number of operations, however, the actual mortality from those cases which must have an operation to save life will not be materially diminished. Some patients will die who might have recovered if earlier turned over to the surgeon, but conservative surgery is the surgery of the future. The ease with which laparotomies can be done has caused the removal of ovaries and gall-bladder, of kidneys and uteri, of appendices and appendages, which later knowledge and more accurate prognosis have shown unnecessary. Postoperative pathology may be fully as serious in its symptoms as ante-operative pathology, and the symptoms more serious and less easy to remove.

There are many symptoms of cholelithiasis and of serious gall-bladder diseases which I have not mentioned, and some which we have all yet to learn. Many cases of so-called gastritis are due to partial or complete blocking of the duct. My personal practice has recorded in twelve years but twelve cases diagnosed as cholelithiasis.

One was operated on before he came under my care; a cholecystotomy with removal of stones was performed by a most eminent New York surgeon. The diagnosis was brilliant, for physicians had been treating him for gastroenteritis and there had been no history of colic. The same symptoms continued in a lessened degree after operation. I sent him back to the surgeon, and he found no more stones on palpation and no reason for further surgical intervention. This patient, on other advice, spent last summer four weeks at Carlsbad and seventeen days at Francisberg. He now feels perfectly well. He takes Carlsbad salts once weekly and occasional doses of sodium succinate. Why could he not as well have been sent to Carlsbad without the operation? This case had given a history of diarrhea rather than of constipation. Of my other cases two are dead: one as a result of urinary suppression following double pneumonia; the other from pulmonary tuberculosis. The other cases are all apparently well at this present writing.

Four of the cases, three of them under observation for ten years, have been advised to undergo operation by me at various times. They have all had partial or complete blocking of the common duct, peritonitis, jaundice, in two cases persistent and severe collapse, and pain attacks with temperature lasting, with slight intermissions, from two to four weeks. I have found gall-stones in three of these cases and know of their presence in the fourth. One patient had a blocking of the cystic duct for several days.

The gall-bladder was distended as large as the head of a fetus at term. Before she came to me she had been under the best medical and surgical care, and immediate operation had been advised. I first saw her in an acute attack, with an absolute agreement to operation when I said it had to be done. She was not in the condition then to be moved, and Dr. Howard Lillienthal was to operate at Mt. Sinai Hospital. This was nearly two years ago. Gall-stones have several times been found in the feces. Twice elongated cylindrical stones the size of a slate pencil and one or two inches in length were caught crosswise at the anus, and she needed my assistance to remove them. In spite of this fact, during one and three-fourths years she had no new attack of biliary colic; further, no tenderness or indication of inflammation in the region of the gall-bladder. Not only that, but she manages a millinery store, does an enormous amount of work, and is so very well that my pocketbook suffers. In this case the material difference was the removal of waist constriction, and more rigid following of treatment because of the constant menace of operation.

In closing, I would suggest that every man who treats gall-stone cases, either medically or surgically, should own and study the Medical Treatment of Gall-Stones by J. H. Keay, and the last edition of Mayo Robson's book on Diseases of the Gall-Bladder and Gall-Ducts. Their careful study will repay both the surgeon and the physician, and what is of still greater importance, the patient.

The London County Council proposes to seek from Parliament during its next session a number of new powers in respect of matters connected with sanitation and the public health. The principal points included cover milk inspection and its municipal supply, compulsory cleansing of verminous persons, the sanitation of fried-fish shops and marine stores, the right to demand that tenement houses shall have water supplied on each floor and be equipped with places suitable for the storage and cooking of food, and the employment of the new class of trained food inspectors. A certain degree of novelty attaches to one power sought, namely, that of requiring laundry owners to supply on demand the names and addresses of their customers, with a view to the tracing by sanitary authorities of possible sources of infection.

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EDITORIAL ARTICLES.

COUNTRY LIFE IN THE FUTURE.

For the northern American colonies there has been almost nothing of that phase of country life which has given rise to the English country gentleman, and which in France has led to the contemptuous use of the word bourgeois. Indeed, if one were to translate this word according to its derived meaning, there could scarcely be found a better Americanism than its literal opposite, jay. Partly on account of their previous habits of life and partly on account of the danger of the savages, the early settlers of northern North America were essentially town dwellers. For certain New England States the poverty of the soil, as compared with the relative wealth of fisheries and the opportunities for trade, also tended to discourage farming except on a meager scale. This tendency to make the town the habitation, rather than the open country, is well illustrated in the grants of land to the soldiers of King Philip's war. With practically boundless territory at its disposal, the legislature rewarded the protectors of the colony with small town lots, whose present value in most instances amounts to little more than a hundred dollars.

While in the subsequent development of the country, especially after the United States had passed the experimental stage and had gained a considerable population, agriculture gained an important place industrially, various factors operated to concentrate greater and greater proportions of the population in cities. Both as cause and effect of this tendency, sanitary, educational, and social advantages have increased out of all proportion in the cities.

The present seems to mark a diminution in the tide from country toward city, and it is not unreasonable to suppose that

the future will witness, not a return to the simple agricultural life of the early part of the last century, but a distribution of various industries in small towns and an increased use of the country and village for residence purposes. For some time New York City has been called the home of the very rich and the very poor. Even the Back Bay district of Boston is losing its prestige, and its residents are seeking that remarkable collection of irregularly laid-out villages which resist the temptation of forming a Greater Boston. Aristocratic Philadelphia, hemmed in on three sides by the impassable boundaries of Market and Pine Streets and the Schuylkill (pronounced in one syllable and a swallow), and assailed by business pressure from the East, is compelled to seek the suburbs. In Cincinnati this transfer of the "better class" has already been accomplished, and the same tendency is manifest, in different ways and degrees, in many other cities.

Meantime, various scientific, mechanical, and economic developments have rendered it possible to substitute for the ideal of a *rus in urbe* an *urbs in rure*. Among these may be mentioned the following: The trolley, the bicycle and automobile, the good roads sentiment, which render it possible to extend the residence district of a city well into the country, even for persons of moderate means, whose working members must go "down-town" daily. The rural free delivery service, the telephone, the extension of the scope of public libraries and private systems of package delivery, which tend to equalize the privileges of city and suburban and country dwellers, with regard to various phases of transportation. The realization that gas and electric lighting and water supplies may economically be secured for aggregations of even a few hundred persons. The discovery of natural gas, and the development of petroleum gas artificially, and the production of acetylene gas, as well as the perfection of the windmill and gas engine, which, jointly or severally, extend the enjoyment of what used to be termed city conveniences, even to isolated homes of fair degree of comfort. The realization that these and other conveniences, such as applications of the plumber's art, may be enjoyed by any one who will carry the former standards of the city into the country. The development of educational advantages, including secondary schools, libraries, and museums, in small towns. Competitive and governmental control of railroads so that the obvious economy of land and certain supplies may be rendered available by manufacturing concerns in small villages rather than in large

cities. Every family, going from city to suburb or to outlying village or open country, tends to increase the commercial necessity of such developments, and thus, by a fortunate cycle, invites other families to make the move. Thus the tendency is growing to make the city more particularly a down-town center with a comparatively small fixed population.

How rapidly this tendency will increase and where it will receive its check is a matter that can at present only be conjectured. Past experience is sufficient to show that some new invention in the way of rapid transit or communication, or even the public control of what utilities are now possessed, but in the direction of cheap and convenient service, may change the conditions of human life quite suddenly.

It is worth while to remind ourselves that we do not need new discoveries and inventions nearly as much as a wise use of what we already have for the benefit of the whole people. Almost within a few months it has been discovered that our laws are sufficient to prevent gross conspiracy to place the price of the necessities of life at an artificially high rate, and to require reasonable honesty in the management of great corporations existing through the sufferance and by the patronage of the people. At any moment it may occur to some wealthy capitalist not to endow another college or library, nor to erect a monument, but to gain the gratitude of the people as a whole by setting aside the principle of making rates according to "what the traffic will stand," and by demonstrating how well and how cheaply a trolley or telephone service may be conducted on the basis of maximum patronage. *Per contra,* labor unions may suddenly conclude to discharge their walking delegates and to establish a wage scale and adherence to contracts which will guarantee steady employment and encourage industrial operations. Any one act of this general nature will tend to produce something like an equilibrium of wealth. Even a local demonstration along any of these lines will afford an object-lesson whose results will serve as an inducement to secure the same advantages for other localities.

The present possibilities of agriculture are not yet in execution. Burbank has developed several plants into varieties of enormously increased yield. Compulsory united effort at the extermination of plant parasites would prevent an enormous aggregate loss. The accurate use of chemic fertilizers, or, still better, the use of bacterial, nitrifying cultures, will make one acre of land the equivalent of four. Labor-saving agricultural machinery has already reached a variety not dreamed of twenty

years ago; it is sold for four or five times the actual cost of production, and through sheer shiftlessness on the part of farmers is wasted by exposure to the elements, to the extent of millions of dollars' worth annually. The farmer is the main foundation of civilized society. If, by carrying out principles already demonstrated, the average farm can have its productiveness quadrupled agriculture will become a desirable occupation, and the country will be not only the possible home of persons whose direct support is derived from manufacture and commerce, but the present tendency to a sharp line between these occupations and agriculture will be checked.

The hygienic advantages of country life under proper sanitary control, and the social and intellectual advantages of such life under circumstances which shall efface the deterrent influence of distance, are incalculable. It may seem that we are indulging in an impracticable dream, and we do not by any means prophesy an immediate change. And yet the only obstacles to the fulfilment of the dream are cupidity, which can be checked by the exercise of a power which the people possess and which scarcely needs special legislation to call into action; ignorance of certain details which should be speedily enlightened in a nation already well educated in ordinary, scholastic ways; the restriction of philanthropy to a few ruts; and lack of initiative in the most energetic people in the world. Again and again it has been demonstrated that an imperfectly educated, insincere fanatic, securing control of a few hundred devotees from the lowest strata of society, could make himself wealthy and raise his dupes to a prosperity far beyond their normal expectation by the crudest exercise of the most objectionable form of communism. Is it a dream to suppose that ordinary business sense and conscientiousness on the part of political leaders and individuals of private influence and opportunity may be aroused to lead a really intelligent and capable public into the possession of benefits of demonstrable possibility?

EDITORIAL NOTES.

The Future of Medicine.

What the future holds in store for those who follow the practice of medicine is something in which every medical man has a deep interest. At the recent dedication of the new Harvard buildings, President Eliot delivered an address on this subject. In the course of his remarks he said that the future occupations

and interests of the medical profession are to be in some respects different from those of the past, and they are to be more various. The ordinary physician has for the last one hundred years been almost exclusively a man devoted to the treatment of diseases already developed in human bodies or of injuries already incurred. He said it is clear that the medical profession must take up with more ardor the work of preventing approaching disease in addition to the work of treating diseases arrived. The profession must recognize that health is eminently a social product, just as the psychologists have recognized that the mind of a civilized man is a social product. We can hardly concur with the learned professor that more ardor is needed in the work of preventive medicine, for some of the world's most brilliant achievements in the past few years have been done by medical men working along these lines. The disinterestedness and public spirit that the profession has always shown in regard to such matters are greater than could be expected from any other class of professional men.

Dangers from the Sale of Old Clothes.

In almost every large city the trade in second-hand clothes is quite a prosperous one. It is carried on mostly by foreigners, who buy up cast-off clothing for trifling sums, and who in turn sell the clothes to merchants. These merchants find a ready sale for their wares, as through divers skilful manipulations they give the clothes the appearance of being new. The danger to the public health of such practice is obvious. These clothes are never disinfected. Doubtless in many instances they have been worn by people suffering from infectious diseases, and in this way disease is carried to the purchaser of the garments. It is time that the authorities should put a stop to this practice.

Spread of Cocaine Eating in India.

The habit of taking cocaine has become of late years so prevalent in this country that in certain parts of the United States, especially in the South, it has become necessary to pass laws restricting the sale of the drug. This evil is now producing disastrous results in certain towns in India, and is unfortunately spreading widely. The Indian government has already taken steps to prevent the sale of cocaine to the natives. It seems too bad that a drug which is such a powerful adjuvant to medicine and surgery should cause so much misery as has cocaine since its discovery.

ITEMS AND NOTES.

The honorary degree of Doctor of Laws has been conferred by Harvard University on Sir Thomas Barlow and Prof. C. S. Sherrington.

THE pure food law will affect the brute world as well as human beings. Adulterated chicken foods and sawdust dog biscuits will be barred equally with impure food for human consumption.

DR. HORATIO C. WOOD has resigned the chair of materia medica, pharmacy, and general therapeutics in the University of Pennsylvania on account of ill health, and has been elected emeritus professor.

THE late Dr. J. E. Neild, of Melbourne, was for half a century a dramatic critic whose judgment was looked upon with particular respect in Australia. It is said that he "discovered" Madame Melba.

MAJOR PAUL C. STRAUB, surgeon U. S. army, was decorated by President Roosevelt, on October 6, with a medal of honor for an act of heroism in saving the life of a wounded soldier in the Philippines on December 21, 1899.

ANTHRAX is reported to have appeared in central Delaware among the live stock, and many animals have died from this cause. The State authorities have ordered all the carcasses of dead animals burned, and are causing animals exposed to be inoculated.

NOTWITHSTANDING its fogs, London has a lower mortality from tuberculosis than other European capitals. In 1904 it was only 166 per 100,000 inhabitants, as against 257.5 in Berlin, 254 in Milan, 256 in Madrid, 314 in Vienna, 383 in Paris, 387 in Moscow.

AT a recent inquest held in London in the case of an infant suffocated while in bed with its parents, the coroner stated that about 2000 infants annually lose their lives in this way in England, there being in the neighborhood of 600 deaths from this cause in London alone.

Professor Neisser (Breslau) has been commissioned by the German imperial authorities to pursue his researches on syphilis, and will accordingly start on a second expedition to Batavia this month. He will be accompanied by Drs. Halberstädter von Prowaezek, Bruck, and Siebert.

Philadelphia keeps pace with the reported general increase of insanity throughout the United States. The latest report of the Philadelphia Hospital for Insane shows a total of 1600 patients, an increase of 109 during the year. The total increase for the past ten years is 75 per cent.

The nineteenth meeting of the French Surgical Congress was opened on October 1 in the great amphitheater of the Faculty of Medicine. The president was Dr. Monprofit, a professor in the school of medicine at Angers, and there was a large attendance of eminent surgeons, both French and foreign.

A congress of midwives was recently held at Düsseldorf, at which 228 associations, with a collective membership of 11,301, were represented. The discussions were not confined to midwifery, but ranged over a wide field, comprising such matters as measures for the reduction of mortality at birth and the use of antiseptics.

The proposal has been made in Ohio to organize a special section of the State Asociation for the Study of Pathology. One of the objects to be accomplished will be the establishing of a uniform technique in carrying out tests and other pathological work so that statistics gathered from different sections of the State may form a reliable basis for deductions.

At the beginning of January, 1907, says the *Novoe Vremya,* it is proposed to call a pan-Russian congress of teachers and caretakers of deaf-mute children in commemoration of the introduction into Russia of the education of deaf-mutes for the first time, in the experimental school for deaf-mutes in Pavlovsk, founded 100 years ago by the Empress Marie Theodorovna.

We learn that the entry for the coming season at the London School of Tropical Medicine is the largest so far recorded. The number of students is now 39; the number of nationalities represented is also greater than it has ever been, there being among the students medical graduates from France, Greece, Italy, Finland, the United States, Nicaragua, and Honduras.

As the result of the pure food law, which goes into effect January 1 next, the Department of Agriculture is making preparations for the increased labor and equipment involved in its enforcement. The working forces and the appliances of the laboratories at Philadelphia, Chicago, Baltimore, and New Orleans will be increased largely, while at New York and Boston there will be new laboratories in which to conduct the necessary examinations of all food products coming into this country.

The Hungarian Minister of the Interior offers a prize of 1000 crowns for the best work on the etiology of trachoma. Essays in competition, which may be written in Hungarian, German, French, or English, will be received up to December 31, 1908. They should be addressed, Belugy-Ministerium 1, Var, Buda-Pesth. Printed works will be received, provided they were published for the first time in 1907 or 1908. The decision of the jury will be announced at the sixteenth International Medical Congress to be held at Buda-Pesth in September, 1909.

The health authorities of the State of Texas have adopted and are enforcing a code of sanitary rules for the sanitation of railway cars which will insure to the traveling public immunity from many of the discomforts to which it is now subjected. Sleeping-cars are to be kept so clean at all times that there can be no possibility of the accumulation of dust or filth of any kind. A measure of the greatest importance is a discrimination between sleeping-cars running within the State and those leaving the State for other States. The latter are not only subjected to the rigid rules of those within the State, but they are required to be fumigated thoroughly every second or third trip according to the number of days which the trip occupies. If an infectious disease is found on board the car must be detached at the next station and disinfected before it is again used.

The Illinois Civil Service Commission will hold examinations very soon for a pathologist at Kankakee ($2500 a year and maintenance), and pathologists in six other hospitals for the insane, paying $75 to $125 per month and maintenance; also for physicians in the charitable institutions, not insane, and for assistant physicians in the hospitals for the insane. These positions pay, according to the *Journal of the American Medical Association*, from $75 to $150 a month. There will also be examinations for surgeons in the Soldiers' Orphans' Home at Quincy, positions which pay from $60 to $125 a month and maintenance. These

positions are of great importance to the institutions of Illinois, and the commission is greatly interested in obtaining the very best talent for the examinations and in making them a success. Joseph C. Mason, secretary, Springfield, Ill., will send further information.

According to the *Army and Navy Journal* of September 29, the surgeon-general of the army has received most favorable reports regarding the sanitary conditions which existed last summer at the various camps of instruction. There was practically no disease at any of the camps, which tends to show that the regular soldier may live without epidemic disease when his health is under the supervision of careful medical officers and when sanitary laws are rigidly observed. Major Charles F. Mason, medical department, has made a verbal report on the condition which existed at the camp of instruction at Chickamauga Park, Ga. There was little sickness there. Major Mason made a most glowing report on the tests of the McCall crematory latrine. The inventor of this crematory, Dr. McCall, was formerly a contract surgeon in the army. It is believed he has solved the problem of a sanitary method of disposing of all waste in military camps.

As a result of the conference between members of the Chicago Board of Education and a committee from the Chicago Tuberculosis Institute, the following innovations are likely to be introduced into the school system: The establishment in every school building of a dispensary room for the examination of suspects and the treatment of cases; separation of the tuberculous pupils into two classes—contagious and non-contagious; the organization of a corps of visiting nurses, to visit the homes of suspects, dress open wounds, and report conditions to the board. It was pointed out that such a corps of nurses would render invaluable service in reducing truancy by investigating all cases of illness and returning the sufferers from minor complaints to the school with all possible speed; regular inspection of all schools at stated periods by medical inspectors; establishment of a system of surveillance for suspects and those suffering with the disease, with a view to excluding the victims the moment their presence in the classroom becomes a menace to the other children; the providing of special educational facilities for the victims of tuberculosis in its contagious forms; the segregation of all children suffering from tuberculosis of the bones.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Results of Operative Treatment of Varicose Veins by the Trendelenburg and Schede Methods.

Varicose veins of the leg, according to Robt. T. Miller (*Johns Hopkins Hospital Bulletin,* September, 1906) are not an incident of senility; the condition is rather a disease of young and middle-aged individuals, over one-third of the cases appearing before the 30th year and two-thirds before the 40th year. From an etiological standpoint there are two classes, viz., inflammatory and non-inflammatory. In 128 cases the right and left legs are affected in about equal proportion; over one-half of the cases are bilateral. Trendelenburg's operation cured 78 per cent in a series of 41 cases; this is about the result generally reported. In the first four postoperative years 89 per cent were cured, in the 5th to 8th postoperative years but 63 per cent were cured. The tendency to recurrence of symptoms increases as the postoperative interval lengthens. Schede's operation cured 33 per cent in a series of nine cases. Of two cases, two years or less since operation, both were cured; of seven cases, more than two years since the operation, but one was cured. The tendency to recurrence of symptoms as the postoperative interval lengthens is much greater after a Schede than after a Trendelenburg operation. Division between ligatures of the saphenous vein does not cause permanent occlusion. The venous stream may be re-established in three ways, viz., formation of anastomoses around the point of division (two cases), formation of varices in the scar (three cases), or end-to-end anastomosis of the ligated stumps (three cases). The Schede operation is followed particularly by anastomosis of ligated stumps; of six cases examined three showed an intact saphenous vein running directly through the scar. Functional restoration of the saphenous vein may be, but is not always, accompanied by recurrence of symptoms. Resection of 8 centimeters or more of the saphenous vein at the saphenous opening made through a general transverse skin incision is to be preferred to simple division of the vein. Postoperative pulmonary embolism is rare, but has occurred between

the fourth and thirteenth days. The onset is marked by sudden dyspnea, cyanosis, tachycardia, and signs of collapse, accompanied by rise in temperature; the symptoms may subside rapidly, may persist with the physical signs of pulmonary infarct, or may be followed immediately by sudden exitus.

Filigree Reinforcement of Abdominal Scars.

From his experience in twenty-two cases, W. Bartlett (*Journal of the American Medical Association,* Sept. 8, 1906) finds that a scar, no matter how thin, if kept from stretching by embedded wires, forms a reliable integral portion of the abdominal wall, and that a ready-made filigree answers all the requirements. Since scars tend to stretch laterally, the filigree need be made up only of cross wires, held together in the middle by a single twisted strand following the line of suture. His operative technique is described. He dissects away the old scar in postoperative hernia cases, opens up the sac, and with the hand inside dissects it away from the abdominal wall, separating the peritoneum and transveralis fascia from the posterior surface of the muscles, trimming it and closing it, and on the bed thus formed by fascia the filigree is placed and held by sutures at its extremities. It does not matter if the defect being large it is impossible to reunite the edges of any suture by the skin; all that is needed is that the edges of the network be covered for a short distance. He is convinced that a segment of the abdominal wall, consisting of peritoneum, filigree, and skin, is sufficient, provided the operation has been properly done. Cases are reported showing how well the contrivance works in various conditions, suppurating wounds, pregnancy, as a prophylactic arrangement, etc. He has had no failures to record in his five years' experience.

Dressing of Wounds.

Miles F. Porter (*American Medicine,* September, 1906) says that unwise efforts to produce asepsis may cause more harm than the bacteria against which they are directed. The surgeon's attitude toward nature should be that of a modest cup-bearer, not that of a usurper. Sutures, redressings, and drains are, at best, necessary surgical evils, hence all sutures should be discarded in favor of the bandage and adhesive plaster when these can be made to serve the same purpose; but when the use of sutures is

imperative, then (*a*) buried absorbable sutures should be preferred; buried non-absorbable temporary sutures should be our second choice; through-and-through sutures should be used only on compulsion; and buried permanent sutures discarded except in work on the hollow abdominal viscera. (*b*) Our aim should be to do the first dressing so that it will be the only one needed until healing is accomplished, and when this is impossible our efforts should be directed toward preventing the necessity of frequent dressing. (*c*) When in doubt, do not drain, but if drainage is imperative let it be adequate without being harmful, kept up while it is needed, and discarded so soon as it has fulfilled its mission.

The Comparative Frequency of Appendicitis in Men and in Women.

The above question is discussed by Dr. Karrenstein of Berlin in a recent number of the *Lancet*. In the surgical text-books appendicitis is said to be much more frequent in the male than in the female sex, the proportion varying according to the different statistics from 74 to 53 per cent for males. Dr. Karrenstein, however, maintains that false conclusions have been drawn from the facts. As the statistics are based on hospital cases and as men are admitted to hospitals in much greater numbers than women it is obvious that more men must be treated for appendicitis than women. It was not the absolute number but the frequency of appendicitis in each 1000 men and 1000 women that should be compared. When this was done it was found that in Berlin the numbers of men and women suffering from appendicitis were nearly equal, and that in 1899 even more women than men were received, the proportions being 2.99 per 1000 men and 4.20 per 1000 women. In Hamburg a considerable and permanent preponderance of appendicitis in the female sex was found to exist.

An Experimental Study of Suture of Arteries.

G. M. Dorrance (*Annals of Surgery*, September, 1906) describes his method for transverse, longitudinal, or oblique injuries of arteries. He reports fourteen operations, nine on horses and five on dogs. His illustrations give a better idea of the procedure than is possible with a description alone. His results and

conclusions are as follows: 1. Only one secondary hemorrhage occurred, and this was traceable to infection from without, as shown by microscopical examination. This is believed to indicate a distinct advantage over other methods. 2. Under the aseptic conditions employed in human surgery the results should be perfect, as thrombosis can usually be traced to infection. 3. Whatever form of suture or suture material may be used, the principle of approximating intima to intima is absolutely essential. 4. The suture must not be involved in the blood current.

MEDICINE.

The Coated Tongue.

L. Kast (*Interstate Medical Journal,* September, 1906) says that the examination of the coated tongue as an index to gastric disorders, upon which formerly so much stress was laid, has now generally fallen into disrepute. This is probably chiefly due to the lack of evidence that the condition of the stomach can affect that of the tongue, either by the direct ascent into the mouth of stomach contents (in the absence of regurgitation, eructation, or vomiting) or otherwise. Kast, however, has shown that such a process actually does take place. A number of patients, all of whom were free from regurgitation, eructation, and the like, were made to swallow capsules containing lycopodium powder. The mouth was rinsed with water that same evening, and again the next morning. In over half the cases the mouth was found to be free from lycopodium in the evening, but to contain it next morning. The conclusion may fairly be drawn that in some cases stomach contents may gradually wander up the esophagus into the mouth and form a coating on the tongue. In these cases the condition of the tongue may fairly be assumed to represent that of the gastric mucosa.

Weights of Viscera in Infants.

D. Bovaird and M. Nicoll (*Archives of Pediatrics,* September, 1906) say that the study of the average weights of the viscera in infants and children up to the age of five years shows that there is a constant relation between the weights of the more important viscera, thus: (*a*) The weight of the liver will average seven times that of the heart. (*b*) The weight of the spleen will aver-

age one-tenth that of the liver. (*c*) The weight of the kidney will average one-ninth that of the liver.

That the weight of the thymus gland as commonly given is excessive, owing to the acceptance of pathological glands as the standard for normal conditions.

That the average weight of the thymus at autopsy is approximately 6.0 grammes.

That there is no evidence of a growth of the thymus after birth under ordinary conditions, but that under special conditions the gland does grow and even hypertrophy enormously.

Subcutaneous Emphysema.

Albert Josias (*Archives of Pediatrics,* September, 1906) reports the following case: A child which had been intubated forty-eight hours for laryngeal diphtheria developed five hours after the extubation a generalized subcutaneous emphysema. Injury to the larynx or laryngeal ulcer as the cause of the emphysema could be excluded. There were, however, from the first day of the disease the characteristic symptoms of mediastinal emphysema, viz., disappearance of the apex beat and absence of cardiac dulness. There were no signs of a pulmonary tuberculosis. The child had passed through an attack of pertussis, a disease which often leaves the lung in an emphysematous condition. To the rupture of one or more of these emphysematous air vesicles the author attributes the subcutaneous emphysema.

Are Injections in Acute Gonorrhea Rational Treatment?

Canon, (*Deutsche Med. Wochenschrift,* 22, 1906) states it as his opinion that the urine washes out the urethra better than can be done by injections. He advises the increasing of diuresis and the medication of the urine by the internal administration of drugs. He states that the gonococci nearly always pass into the blood, but rapidly die there unless they can find a place with lessened resistance where they can locate and multiply. This condition is very liable to follow urethral injections, which frequently set up inflammations by erosion of the mucosa and by the introduction of pyogenic germs from without.

THERAPEUTICS.

Treatment of Functional Enuresis.

D. Zanger (*British Medical Journal,* Sept. 8, 1906) lays stress upon the difficulty of treating cases of this disorder which have been allowed to become established in the habit. Nevertheless a cure may be looked for if suitable treatment be adopted. The parents and teachers should be instructed not to treat the child in a peculiar way, as though it were different from other children, as this only tends to increase the neurosis by constantly drawing the child's attention to the malady. Great attention must be paid to the opening of the bowels daily; no fluid should be given after four o'clock in the afternoon; the diet should be free from spices and condiments of all kinds; and the mattress should be a hard one. During the night the child should be taken up and made to empty the bladder, and should be rubbed down with cold water every morning. In specially resistant cases he has found massage of the neck of the bladder from the rectum efficacious; this may be carried out by the finger once or twice a week, for four or five minutes at a time. Faradization of the bladder for five to ten minutes, with gradually increasing current, has also been found useful in such cases, the two electrodes being placed over the bladder, or one on the bladder and the other on the spine or the perineum.

A Possible Danger in the Therapeutic Use of Osmic Acid.

A. E. Hertsler (*Medical Record,* Sept. 8, 1906) states that osmic acid, in common with several other minerals used in microtechnique, acts differently from true stains, in that a definite chemical reaction takes place, producing a precipitate of a more stable compound of the metal. This result takes place in recent tissues only. Definite substances in the tissues are acted upon by these chemicals. The only one of this group of substances that has been definitely worked out is silver nitrate. It combines with the chlorides of the tissues, forming silver chloride. This compound is quickly fatal when injected into the blood-vessels or abdominal cavity. When a dilute solution of osmic acid is injected into the free peritoneal cavity, particles are carried to the kidney, as in the case of silver chloride, with the small accompanying hemorrhages. Although the small amount of osmic

acid used in the treatment of neuralgia is probably not great enough to jeopardize life, still there is a limit to the amount of the chemical which can be safely used in therapeutics.

Hay-fever Relieved by Treatment Directed to the Antrum of Highmore.

Jacob E. Schadle (*Medical Record,* Sept. 8, 1906) reports this case. The patient had been suffering for a period of almost two years with hay-fever and asthma. The writer established a treatment along the antral theory of the disease. Both antral cavities were irrigated with a warm boric acid solution until the return fluid was clear and free from sediment. The sinuses were then freely insufflated with thymol iodide. This treatment was continued for five days. Ever since the third day the symptoms have disappeared. The environment was not changed, nor was any treatment given other than that described above.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

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Paraffin Plates in the Treatment of Symblepharon.

In the severer cases of symblepharon, W. H. Wilder (*Journal of the American Medical Association,* Aug. 25, 1906) remarks that the ideal operation implies the restoration of the fornix and mobility of the eyeball, or, if this is absent, the securing of a cul-de-sac allowing an artificial eye to be worn. While the ideal graft material cannot always be obtained, Thiersch grafts of suitable size may be employed, and he suggests as a material for holding them firmly and smoothly in place sheet lead coated with paraffin, which can be easily shaped by scissors, knife, and file, with a proper opening to fit the cornea. The paraffin, of course, should be hard, with a melting point not lower than 130° F., and the grafts applied to the paraffin, to which they adhere, and the plate inserted into the new fornix after having been covered. The details of his technique are given. His conclusions are as follows: "The advantage of a plate for holding mucus or Thiersch grafts in place in the fornix of the eyelids is obvious. The advantage of the paraffin plate is that it can do no harm to

the cornea. It can be built up as required to fit any conjunctival cul-de-sac that has to be lined with a Thiersch graft. The graft adheres to the paraffin, so that it can be evenly smoothed out on it, and thus perfect coaptation is secured between the graft and the raw surface of the cul-de-sac. To accomplish this, the graft should be thin and large enough to cover all raw surface, no suture being required. With perfect coaptation the graft will have secured a firm hold at the end of forty-eight hours, and the plate can be removed for cleansing the eye. In case of restoration of the socket for prothesis, it may be left in place for a considerable time, for the sac can be cleaned by irrigation through the holes in the plate. If it is so large that there is difficulty in removing it, it can be cut in two and the subsequent treatment continued with a plate that can be more easily inserted."

A Contribution to the Etiology of Otitis Media Acuta Suppurativa Post Morbillos.

Gustav Baar (*Medical Record,* Aug. 18, 1906) reports the history of five children in the same family who were attacked with measles. In all of them there appeared an acute suppurative otitis media. In three of these children the mastoid process, the antrum, and the cranial cavity had to be opened on account of alarming cerebral symptoms, which appeared in spite of previous painstaking antiphlogistic and antiseptic treatment, poultices, and drainage after careful irrigation of the exterior auditory meatus with warm solutions of borax or instillation with peroxide of hydrogen and drying. The writer declares that the appearance of purulent inflammation of the middle ear at the end of the second week of illness seems to speak very much against the universal view that the measles otitides are caused by the primary exanthem. The pus taken from the depth of the exterior meatus, as well as from the antrum, mastoid process, and extradural abscesses, contained the same staphylococcus.

Bier's Hyperemic Treatment of Mastoiditis.

S. J. Kopetzky (*Archives of Otology,* August, 1906) in discussing Bier's method of treating acute otitis media, either with or without mastoiditis, says that if used early it will greatly increase the probabilities of curing the condition without resort to major operative measures. In cases cured under its influence the reëstablishment of ear function will occur quicker than under

the usual line of treatment. Its use by the inexperienced is absolutely dangerous. Its employment should be limited to the young and the otherwise healthy. Finally, when the indications are kept in mind, and when properly and intelligently used, induced hyperemia will be found a measure destined, when its scope and limitations are better understood, to find a permanent place in otologic therapeutics.

DERMATOLOGY, SYPHILIS, AND RAY THERAPY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

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Recurrent Herpes of the Buttock.

D. Dubreuilh (*British Journal of Dermatology,* September, 1906) says that recurrent herpes, common on the lips and the genitals, and of the type usually known in this country as febrile herpes, appears to be very uncommon on other parts of the body. Less than a dozen cases apparently rest on record with a distribution on the cheek, and its appearance on the buttock seems nearly as uncommon. Dubreuilh has collected in all eight cases, beginning with the initial observation of Bertholle in 1876, and including three hitherto unpublished cases. Prodromal neuralgia was noticed in three cases, and all the patients could be styled "nervous arthritics," with personal or hereditary history of migraine and gouty inheritance. In two cases distinct mental symptoms were noted. The eruption always appeared at each recurrence in the same position and unilaterally. The eruption produced by antipyrin resembles that of recurrent herpes most closely, and the absence of such medication should be ascertained before a diagnosis is made.

No treatment has been found to exercise much impression on the tendency to have these attacks. Gouty conditions should be treated when present.

Metastatic Inflammations of the Skin Due to Gonococci.

A. Audry (*British Journal of Dermatology,* September, 1906) reports the following case: The patient, a young man aged 19 years, noticed a urethral (gonorrheal) discharge on March 5, 1905. The flow ceased in three days, and was succeeded by

articular pains and fever, and finally by a scarlatiniform eruption, occupying the thigh, buttocks, abdomen, neck, and arms. This disappeared in a few days, leaving an erythematous eruption on the knees and wrists exactly like erythema multiforme. The erythematous patches began to show minute points of suppuration, which coalesced into an abscess, which was incised, the pus from which was found to contain abundant gonococci. Sections of the skin taken from the margins of the abscess showed the presence of gonococci in many of the polynuclear leucocytes; sections from the erythematous patch of the knee showed a polynuclear infiltration around the blood-vessels. Audry suggests that many dubious forms of erythema multiforme are due to an unsuspected gonorrheal infection.

GYNECOLOGY AND OBSTETRICS.

The Use of Forceps.

A. Demelin (*British Medical Journal,* September 8, 1906) discusses under what circumstances the application of forceps, being apparently indicated, may be deferred or avoided. He deprecates the present teaching that the forceps are to be used very exceptionally; he considers a good pair of forceps, handled with care, slowly and gently, is an invaluable instrument. Many cases are met with in practice in which it is possible to temporize or even to abstain from their use; there are others in which it is absolutely indicated to save the life of the fetus or mother. Presentations of the shoulder or breech call for extraction by the feet, but when the head is fixed or engaged and the uterine muscle is retracted instrumentation is needed. The question whether to wait or to assist is often difficult to decide when there is no danger and the labor is normal, only tardy; this occurs usually in primiparæ who have been exhausted by the long period necessary for the dilatation of the os. After twenty to twenty-four hours of labor the pains become few and feeble, and the patient inclines to sleep; if then the fetal heart sounds are normal and there is no sign of meconium in the amniotic fluid, it is wise to allow her to sleep for an hour or two. On awakening give an alcoholic drink, hot, with plenty of sugar in it, since sugar is a good muscular stimulant; follow this with a hot bath and a large dose of sulphate of quinine, and generally expulsive efforts will be reëstablished and terminate favorably. Hot douches do not reach the

uterine muscle when the head is engaged and low down. When there is complete dilatation and the membranes are still intact, they must be ruptured in an interval between the pains. Some women, although vigorous, are nervous and cowardly when they feel the head on the perineum, cease from expulsive effort, and make no progress. A few whiffs of chloroform are sufficient to encourage the patient and produce the desired result.

In primiparæ, in spite of strong effort, the firm perineum prevents progress; it is permissible to add abdominal expression to the efforts of nature. Mounting upon a chair beside the bed the palms of the hands are placed on the fundus, and when the contractions occur steady pressure is made upon the fetus in the direction of the pelvic outlet, the perineal resistance is thus overcome, and the application of forceps is avoided. In a case in which there is full dilatation of the os and no advance is being made, examination may show the head lying in the transverse or oblique diameter, and not fully flexed. It is possible to assist the head to flex and turn; this is best done during the pains by introducing the first finger into the vagina, and during the contraction pressing upon the head near the anterior fontanel in such a manner as to promote flexion, or it may be possible to get under the convexity of the occiput and draw it downward. By pressing behind the ear in the direction required rotation is assisted; should the contraction cease before complete rotation is effected, the hand should be retained in position ready for the next pain. Rotation and flexion having been procured delivery will not be long delayed. There should be a limit to the time of waiting after the full dilatation has occurred. In uterine inertia often one may safely wait for five or six hours, but it is unwise to allow the maternal soft parts to be bruised too long between the head and the bony pelvis; there is a risk of edema, lacerations, and possibly of fistula resulting.

When the pains are vigorous and no progress is being made two hours after full dilatation, interference is necessary. Such cases used to be left for ten or twelve hours until the fetal head was increased in size by a hematoma, and the difficulty of delivering resulted in a torn perineum, a vesicovaginal fistula, and infection by lacerations. These fistulæ are now very rarely seen. In deciding whether to wait or to intervene, the position of the head in the cavity is an important point. As long as conditions are favorable it is well to temporize, but when symptoms of urgency arise there should be no hesitation in applying the forceps.

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ORIGINAL CONTRIBUTIONS.

AUTOINTOXICATION AS A CAUSATIVE FACTOR IN DISEASE, AND ITS RATIONAL TREATMENT.[1]

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The subject of autointoxication has received from time to time careful consideration, and the literature has become quite extensive. The pathologist, the bacteriologist, and the clinical investigator have alike toiled in this field of experimental medicine, and each has contributed his share of valuable data which help to elucidate the obscure paths of the pathology of metabolism. The general practitioner alone, it seems, has failed to grasp the full significance of autointoxication as an important factor in the production of many diseases and minor ailments, which he is still wont to designate as "malaria," "bilious fever," "rheumatism," and a "touch" of one or the other of the infectious fevers which autointoxication often simulates. How often is the already overworked plasmodium malariæ held responsible for ailments with which this parasite has nothing to do? How often does one hear of an "aborted" typhoid fever, for which the Eberth bacillus is in no way responsible; and as to rheumatism, it is frequently tacked on every ache and pain of an obscure origin. Yet a more careful analysis of these cases will reveal their true nature. They present the symptom-complex of autointoxication.

Inaccurate diagnosis leads to irrational treatment, and what is more, erroneous diagnosis forms the material on which quackery flourishes. Every time we make a diagnosis of some grave ailment when the patient is suffering merely from the effects of the effete products of metabolism, we enable the quack to cure a supposedly incurable disease.

[1]Read before the Delaware State Medical Society.

It is generally recognized that intestinal fermentation produces various symptoms of autointoxication, such as headache, vertigo, functional cardiac disturbances, anemia, and other minor ailments, but that autointoxication as the result of perverted metabolism is the immediate cause of such grave disorders as chronic nephritis, diabetes, gout, and a number of other maladies of obscure etiology is not so generally known or accepted. Yet a careful consideration of the underlying factors will convince us that such must be the case.

We are all agreed that microörganisms are the specific cause of the respective infectious diseases, and we know of the severe constitutional disturbances which frequently accompany these affections. We also know that the pathologic conditions are produced not by the microörganisms *per se*, but by their toxins, either extracellular, in which case they are derived from the living microörganisms, or intracellular, in which case they are derived from the dead disintegrating bodies of these parasites. It follows then that unicellular organisms, such as bacteria and protozoa, are capable of generating poisons or toxins, which cause serious illness and often death of the animal organism. These toxins are the natural products of metabolism of the microparasites in the same manner as the poisonous alkaloids are the metabolic products of the higher plants, and the venoms the metabolic products of certain insects and snakes. In other words, the natural excretions of living protoplasm are protoplasmic poisons, and the very fact of their excretion shows that they are no longer an integral part of cellular protoplasm, but constitute a foreign substance.

What is true of bacteria and certain protozoa is equally true of the cells of the animal body. Each cell in its cycle of vital activity throws off material which it no longer requires for its existence, and this material is thrown off because it can no longer be tolerated by the protoplasm. In fact, the act of excretion is no doubt brought about by the irritating action of this effete material on the protoplasm in the same manner as the presence of feces in the intestinal tract produces peristalsis or action of the anal sphincters. This effete material, I repeat, is a protoplasmic poison, and if retained would destroy the life of the cell. How these excrementitious products act on the protoplasm we do not know, but if we accept Ehrlich's chain theory of immunity we may conceive that they act as toxophores, combining with the receptors of the cellular biogens and thus depriving them of their

vital activity. However, whatever the exact mode of their action, there is no doubt about the toxic effect of the excrementitious products of cellular activity. This has been recently demonstrated by experiments on animals. Thus it has been found that the blood of an animal of one species is toxic to an animal of another species, causing, when injected intravenously, agglutination of the corpuscles and solution of the red cells (hemolysis). This is not the case with the blood alone. The cells of the kidneys (nephrotoxin), nervous system (neurotoxin), liver, or other organs and tissues of an animal of one species are toxic to an animal of another species. It is not the protoplasm of these cells that is toxic, but the excrementitious products of cellular activity which are introduced together with the cell emulsions.

If this is true, and I am fully convinced that it is so, why do not these toxic products poison the body? This pertinent question can be readily answered. In the process of animal evolution certain cells have acquired the property of elaborating certain antitoxins. In other words, an immunity has been established. That this is the case we glean from the experiments referred to above, which show that susceptible animals may be gradually immunized to the action of foreign cellular toxins (cytotoxic immunity). Thus by injecting repeated small doses of foreign blood into an animal which is susceptible to its toxic action, an immunity may be finally established. This is equally the case when emulsions of other tissues are injected.

The cytotoxins which are not neutralized by the immunizing principles are partly oxidized by various oxidizing ferments which are secreted by certain cells, probably the ductless glands (Sajous), and partly eliminated with the urine and feces.

The evidence of the oxidation of these toxins in the body is incomplete and rests mainly on the observations made in exophthalmic goitre, and the physiologic effect of the thyroid extract. The evidence of the elimination of toxins with the urine is more direct, and has been furnished by numerous experiments of Bouchard and others on the toxicity of urine and feces on animals.

In addition to the cytotoxins certain secretions in the body are distinctly poisonous. Thus, the bile is toxic, the toxicity depending largely on the salts of taurocholic and glaucocholic acids and the bile pigments. During the twenty-four hours a man secretes from 800 to 1200 cubic centimeters of bile, and this contains enough poison to kill three men. Poisoning is prevented normally by the bile salts being precipitated in the intestines.

Whether any of the so-called internal secretions are at all toxic, we have as yet no means of knowing.

The cytotoxins, as has already been intimated, are analogous to bacterial toxins, possessing similar biochemical properties and physiological actions. During the process of nutrition other poisons are elaborated in the course of the various changes which the food material must undergo before it becomes an integral part of cellular protoplasm. Also the process of disintegration of dead cells is accompanied by the elaboration of poisonous substances. These poisons are more nearly allied to the alkaloids, and in some cases can be isolated, and their identity established.

These poisons may be of nitrogenous origin, as the xanthin bases and ammonia, or non-nitrogenous, as CO_2 and the various salts. We are as yet unable to state the nature of the intermediary stages through which the poisons elaborated in the process of nutrition pass before they are finally eliminated through the emunctories. Whatever their character, they are no doubt destroyed principally in the liver, and only an insignificant portion is eliminated through the kidneys. The final products of nitrogenous metabolism, as urea and uric acid, are non-poisonous. On the other hand, the intermediary products are distinctly toxic. Thus the antecedent of urea, which is ammonium carbamate or carbamic acid, causes in dogs convulsions and death, and is no doubt responsible for the uremia of nephritis. Uric acid, which is blamed for rheumatism and gout and has been for years the bugbear of the profession, is derived from two sources: (1) the nucleins of the cells of the body, and (2) the nucleins and xanthin bases of the ingested food. It may also be formed synthetically from urea and lactic acid. But uric acid is non-toxic. Injections of large quantities of the substance into animals proved to be inert, while feeding experiments in man gave negative results. On the other hand, the xanthin or alloxuric bases are toxic. These include hypoxanthin, xanthin, adenin, and guanin. According to Kruger and Solomon, heteroxanthin and paraxanthin produce in frogs rigor of the muscles and a gradual or rapid paralysis of respiration, loss of motion in the extremities, and decreased reflexes. Croftan injected small doses of xanthin into guinea-pigs, and found at the expiration of from two to six weeks granular degeneration of the epithelial cells lining the tubuli and a proliferation of the endothelium of the intertubular capillaries. A similar observation was made by Gaucher, Kolish, and Taudler. Minkowski introduced into the stomach of a dog

4 grammes of pure adenin in 150 cubic centimeters of water. Two hours later the animal vomited, and during the next few days was very ill, vomiting repeatedly and suffering from entire loss of appetite. The animal eventually recovered. In another experiment a dog received 2 grammes of adenin in milk in repeated small doses. Six hours after the last dose vomiting commenced and was continuous for some time, accompanied by complete loss of appetite. On the eighth day the animal died. Autopsy showed profound changes in the kidneys.

The other members of the xanthin group are but feebly toxic.

Other substances which are the products of perverted catabolism of tissue cells are acetone and diacetic acid. They occur in starvation and when carbohydrates are withheld from the food. Acetone, or more especially diacetic acid, is highly poisonous and is no doubt the cause of diabetic coma.

The poisonous effect of CO_2 is too well known to require any further comment.

The toxic substances discussed so far are what may be termed endogenous toxins. They arise within the tissues and are due directly to the vital activity of the tissue cells. These are by no means all of the poisons which threaten our existence. There are the exogenous poisons; the poisons generated within the body by foreign agents. With the exception of mechanical, thermic, and other physical irritants, these agents are living bacteria and protozoa. Of the bacteria, the specific parasites engender certain tissue changes which are characteristic and which constitute definite diseases. The non-specific bacteria, though incapable of elaborating toxins within their own bodies, and though incapable under ordinary conditions of penetrating the tissues of their host and there leading a parasitic existence, are nevertheless capable of producing such changes in their surrounding medium as to give rise to the elaboration of highly toxic substances. The arena of their activity is usually the gastrointestinal tract, and owing to the antiseptic influence of the gastric juice in health the changes produced by these bacteria take place principally in the intestines. These changes consist in the elaboration of poisonous substances from the dead material to be found in the intestinal tract. Some of these poisons are ptomaines, which are basic substances formed by the action of bacteria upon dead organic matter. Of these quite a number have been isolated and proved highly toxic, producing severe gastrointestinal disturbances and even death. The other products of

what is known as "intestinal putrefaction" are: Acids—acetic, butyric, valeric, sulphuric; ammonia and its compounds, leucin, tyrosin, indol, skatol, cresol, phenol. Gases—methyl mercapton, hydrogen sulphide, methane; and certain alkaloids.

Many of these are highly poisonous, and none is devoid of toxic action. Thus, to quote a single experiment, Herter found that indol, a common product of intestinal putrefaction, produces in both rabbits and dogs cardiac and respiratory depression, general prostration, marked contraction of the pupils, irregular clonic spasms, and increased reflex excitability. When large doses were injected death was produced from cardiac failure. Chronic indol poisoning was found to produce profound disturbances of nutrition ending in death. Post mortem the liver was found congested and the seat of degenerative changes.

While it is impossible to determine the exact toxic value in man of the several end-products of metabolism still unidentified, an adequate idea may be formed from the investigations on the toxicity of the urine by which all of the toxins not neutralized in the body are eliminated.

According to Bouchard, the toxicity of normal urine is such that an average of 45 cubic centimeters of urine kills one kilogramme of living animal. The toxic symptoms induced by intravenous injections of urine are necrosis, dyspnea, diuresis, subnormal temperature, diminution of reflexes, somnolence, coma or convulsions, and death. The average man secretes with the urine in 52 hours sufficient toxic material to poison himself, if that amount were retained. It is noteworthy in this connection that when these toxic substances are retained, as in uremia and eclampsia, the urine ceases to be toxic.

It is thus seen that man is continuously elaborating poisons which menace his existence, or, as Bouchard neatly puts it, "he makes continual attempts at suicide by intoxication."

The rôle played by the various toxins in the production of definite diseases is as varied as the toxins themselves.

First the cytotoxins. These, as has been already intimated, bear a close resemblance to the bacterial toxins. Like most of the bacterial toxins, they show a predilection for the nervous system, and through the latter cause profound changes of nutrition as well as insidious changes in the internal organs. The various diatheses and a number of the so-called metabolic diseases are no doubt primarily caused by the failure of the immunizing substances to neutralize the cytotoxins. Indeed, it appears quite

probable that pernicious anemia is caused by hemolysins which are not neutralized by the respective antitoxins (antihemolysins). In other words, it is a form of autohemolysis, a condition not at all uncommon in connection with the lysins.

While opinions in this respect must of necessity be based on hypothetical grounds, yet I believe that many diseases which resemble infections are not of bacterial origin, but are caused by the cytotoxins.

The poisons which result from nutrition metamorphosis act as irritants to the internal visceræ. This irritation may lead to acute derangements of their functional activity, or if long-continued may bring about interstitial changes through the proliferation of fibrous connective tissue. Cirrhosis of the liver and nephritis are thus produced.

The poisons generated in the intestinal tract through the action of bacteria are more explosive in their character. They act either as irritants to the gastrointestinal mucosa, or, like alkaloidal poisons, through the nervous system.

Krasnoff (*Vratch,* No. 17, 1901) found by experiments on dogs that intestinal autointoxication causes a diminution of the red blood-corpuscles, hemoglobin, and iron. Minor (*Medical Record,* Dec. 2, 1899) observed two cases of Graves's disease which led him to believe that they were the result of autointoxication from the intestinal tract. Kauffmann (*Edinburgh Medical Journal,* April, 1900) has studied 14 cases of nervous affections, which lead him to the conclusion that they were caused by intestinal autointoxication. Of these cases two were of tabes dorsalis, four of melancholia, four of epilepsy, one of neuralgia, one of headache, one of nightmare, and one of dizziness. Autointoxication is frequently the cause of various nervous disturbances in children who are especially subject to intestinal derangements.

Roberts (*American Medicine,* Oct. 25, 1902) reports a case of confusional insanity as a result of autointoxication. This case was characterized by a periodicity of the nervous and mental manifestations, with a tendency to recurrence and association with obstinate constipation. Butler (*Journal of the American Medical Association,* Feb. 8, 1902) is of the opinion that a condition resembling locomotor ataxia, confusional insanity, transitory frenzy, melancholia, stupor, amnesia, and milder cases of unilateral headache, dermatosis, irritable bladder, etc., are expressions of autointoxication.

To sum up, autointoxication may result:

1. From non-neutralization of the cytotoxins, which are normal end-products of cell life.

2. From failure on the part of the liver to destroy the poisonous products of metabolism (hepatic insufficiency).

3. From the failure on the part of the kidneys to eliminate the circulating toxins (renal insufficiency).

4. From gastrointestinal disturbances favoring intestinal fermentation. Of these, motor insufficiency of the stomach and intestinal atony are the most important.

The treatment of autointoxication resolves itself into an effort to remove the cause and establish metabolic equilibrium. As the causes are varied the therapeutics must be adjusted to the individual case.

Autointoxication due to cellular poisons (*autotoxins*). In this condition there is a failure on the part of the organism to produce the required antitoxins. The administration of artificial antitoxins would be the ideal method, but is as yet the method of the future. Weichardt (*Münch. med. Woch.*, vol. li, No. 48, Nov. 29, 1904), who succeeded in isolating a toxin from muscles in a state of fatigue, was able by successive injections to produce an antitoxin which completely protected the animal against the effects of the fatigue toxin. It may be that in the near future we shall have a nephroantitoxin, a neuroantitoxin, an antihemolysin, an antithrombin, etc. For the present, however, we must content ourselves with the administration of such drugs as have proven to modify the perverted functional activity of the organs. These drugs are usually classed as alteratives, and their action no doubt depends on their stimulating effect on tissue cells. Mercury, iodine, arsenic, gold, iron, etc., are all poisons in large doses, but in small doses they act as stimulants to cellular activity. It is for this reason that these drugs are employed in chronic diseases.

In addition, diet, exercise, hydrotherapeutics, electricity, etc., may be appropriately applied as stimulants to nutrition.

Animal therapy has of late claimed a place of considerable importance in the treatment of metabolic diseases. So far we cannot say that any great success has been achieved. Our knowledge of the exact nature of these therapeutic agents is extremely obscure, and we are not in a position to even generalize, let alone draw definite conclusions. So far it has been found that the extracts of the suprarenal gland and the thyroid gland

are powerful agents, the one acting as a powerful vasoconstrictor and the other in some way supplying the deficient internal secretion of the thyroid gland. But here our knowledge ends. The other animal extracts, from the extract of the testicle to that of brain tissue, have not justified the roseate hopes of the enthusiasts.

It would seem on *a priori* consideration that extracts of animal cells would act injuriously on the human organism, inasmuch as they are derived from a foreign body. The reason they are comparatively innocuous is that they are administered by the mouth and are probably destroyed during their passage through the gastrointestinal tract. The only animal which could furnish us with real active cellular extracts is the monkey, whose cells and tissues seem to be very nearly allied to those of man, and therefore harmless in so far as the action of the foreign cytotoxins are concerned.

In cases of autointoxication from the poisonous products of nutrition, our efforts should be directed toward the destruction of the poisons in the body and elimination through the emunctories. Here we should take into consideration the two very important organs, the liver and kidneys. Insufficiency of either may lead to fatal complications. Hepatic insufficiency means failure of destruction of the poisons, while renal insufficiency implies their defective elimination. I need not stop to consider the many drugs used more or less successfully as hepatic and renal stimulants. I will only state that they are all largely empirical, and the applicability of each to the individual case should be carefully studied. This being the case, we can realize how unwise and unsafe it is to employ proprietary combinations the composition or physiological action of which is known only to the manufacturers.

In the treatment of diseases brought about by autointoxication from defective nutrition metabolism, one must be governed largely by the stage of the disease. In the early stages a corrective or constructive method of treatment may be employed in the hope of securing a restitution of the perverted metabolism. In the later stage, or when the disease has become definitely chronic, hope of restitution or "cure" can no longer be maintained, and the eliminative treatment should be instituted to prevent fatal poisoning. I can best illustrate this by diabetes. In the early stages of this disease strict adherence to an exclusive diet together with the institution of a hygienic régime may in some cases bring

about a cure. In the later stages, on the other hand, an exclusive diet will lead to the very accidents which terminate the lives of these unfortunate victims, and therefore our efforts should be directed mainly toward the elimination and destruction of the poisonous substances formed. In a case of diabetes at present under my observation, a case of some ten years' standing, the treatment consists in the administration of codeine, strychnine, tr. ferric chloride, phosphate of soda, and yeast. The codeine acts as a nerve sedative, the strychnine as a heart stimulant, the tr. ferric chloride, 20 drops three times a day, as an oxidizing agent, the phosphate of soda as a cholagogue laxative, and the yeast as a glycolytic agent, splitting up the sugar. The patient has been nervous, weak, and quite ill, eliminating over four per cent of sugar until this method of treatment was instituted. The introduction of this treatment has been followed by marked improvement both in the general condition and the glycosuria. The improvement still continues. This patient is on a mixed diet.

In the treatment of toxemias due to infection with pathogenic microörganisms the underlying principles should be:

1. The administration of antitoxin whenever such is available, as in diphtheria.

2. The maintenance of the patient's vitality to enable him to manufacture his own antitoxins.

3. The elimination of the poisons.

4. The prevention of the formation, destruction, and elimination of accessory poisons generated by bacteria other than the specific microörganisms. A careful study of the underlying principles has convinced me that in cases of toxemias venesection is indicated.

The history of venesection is very much like that of calomel. For a time calomel had been used indiscriminately to the point of salivation and proved decidedly harmful. The profession finally abandoned this dangerous drug, dangerous because of abuse, and the employment of calomel had been tabooed for years. However, no remedy possessing real value can be permanently suppressed. The sober second sense of the profession has rehabilitated this most useful drug, and at present there is not a physician who does not consider calomel his chief stock in trade. And this because the drug is now used in proper cases and in small doses.

What is true of calomel is also true of venesection. The lancet of the bygone days had been used indiscriminately, with the sole purpose in view of relieving congestion and reducing

blood-pressure. There is no doubt that many lives had been saved by this measure, and others sacrificed through its indiscriminate employment. With the introduction of aconite and veratrum into therapeutics, the reason for venesection ceased to exist, and the profession rejoiced. "Bleed the patient into his own veins" became the slogan of the therapeutist. Venesection was soon forgotten, having been replaced by this new mode of bleeding without abstracting a drop of blood. However, we find a considerable cooling off of this enthusiastic indorsement of aconite and veratrum. The almost universal employment of these drugs has not been accompanied by the results expected. Why? Because the reduction of blood-pressure relieves only a condition of the vascular system, but does not remove the cause. The blood-pressure is raised in uremia and eclampsia as a result of the toxemia, and consequently its reduction without the removal of the cause cannot lead to a permanent improvement of the morbid condition.

Venesection, the old-fashioned bleeding, alone can relieve the blood-pressure and at the same time remove most of the toxins. Some one, I think it was Bouchard, said that by abstracting one ounce of blood we remove as much poison as we would in thirty quarts of urine. The blood is surcharged with toxins. What is more rational than the removal of these toxins directly, before they have a chance to circulate and affect the tissues? I am certain that venesection should be employed in all sthenic cases of toxemia, and even in asthenic cases it could be safely employed together with saline infusions. I have ample authority for the statement that the mere loss of two-thirds ounce of blood—*i.e.*, the blood-corpuscles and plasma—is of little consequence so long as the blood-pressure can be maintained; and this may be readily accomplished by the employment of saline infusions. I doubt not that the near future will see us employ venesection in pneumonia, a disease so often accompanied by grave toxemia, and similar conditions.

In the treatment of acute infections accompanied by accessory intoxications the efforts should be directed toward the elimination of the additional poisons, even if the specific bacteria cannot be successfully reached. A disease in which these secondary intoxications play an important rôle is typhoid fever, and here treatment addressed to the secondary intoxication is certainly indicated. I am not prepared to share in Osler's derision of the use of intestinal antiseptics on the ground that the typhoid bacilli

cannot be reached, and there is no way of attacking the harmful and leaving the beneficial bacteria in the intestinal tract. Granting that the typhoid bacilli, at least those in the spleen, are inaccessible, there are the putrefactive bacteria which can and should be reached. Many of the phenomena of typhoid fever, such as stupor and delirium, are often the result of secondary intoxication by the products of intestinal putrefaction. I know of no particular useful bacteria in the intestinal tract, and at any rate I know of none that could not well be sacrificed in view of the necessity of getting rid of the distinctly harmful putrefactive germs. The rational treatment of typhoid fever consists in the avoidance of such articles of food as would tend to increase intestinal putrefaction, particularly beef tea, and the employment of some safe antiseptic. The following combination appears to be both rational and efficient:

Guaiacol carbonate ..... gr. ij-v.
Charcoal ..... gr. v.

Make in konseals and administer one every three hours.

I have seen patients with typhoid fever brighten up and remain bright and the evacuations lose their offensive odor under this treatment, and several physicians to whom I have recommended it have invariably reported excellent results.

In this combination the guaiacol carbonate acts as an intestinal antiseptic, while the powdered charcoal both protects the inflamed and ulcerated mucous membrane and absorbs the toxic products. Charcoal has a specific affinity not only for odors but also toxins. We all know how readily it decolorizes urine, and Bouchard is authority for the statement that some of these pigments are highly poisonous. In fact, it has been found that when urine is filtered through charcoal it loses one-third of its toxicity.

In the treatment of autointoxication of intestinal origin the indications are clear. The poison should be eliminated as soon as possible, and a bland diet instituted until conditions return to their physiological standard. In this connection I want to point out that calomel is a much safer cathartic than a saline, and for a rapid evacuation of the bowels castor oil is to be preferred. The reasons for this will become apparent upon consideration of the factors involved. In cases of constipation, autointoxication from the feces is prevented by the latter being in a solid mass. A saline purgative liquefies this fecal mass and dissolves the

poisons, which are immediately absorbed. On the other hand, castor oil coats the intestines and prevents the absorption of the poisons. Here we have another instance of a time-honored remedy, abandoned merely because of its being old-fashioned, rehabilitated, and the reason for its employment for generations made evident on physiological grounds.

This subject is too wide to be adequately covered in a brief paper. All I hoped to do was to present an outline, leaving it to you to fill it out with the results of your individual experience. The points I would particularly emphasize are:

1. In the production of morbid changes in the tissues toxins in one form or another are the causative factors.

2. Morbid changes are produced by toxins, whether endogenous or exogenous.

3. In the treatment of these conditions the remedies should be directed toward the neutralization, destruction, and elimination of the toxins.

ANENT THE PATHOGENESIS OF SYNCYTIOMA MALIGNUM.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

Since Chairi (*Wiener med. Jahrb.*, 1877) discovered and imperfectly described what appeared to be a hitherto unrecognized variety of malignant disease involving the corpus uteri, which in three instances under his observation developed in young primiparæ soon after delivery and terminated fatally within six months, there has been much discussion, speculation, and controversy concerning the morphology, pathogenesis, pathological histology, and classification of the neoplasm mentioned in the superscription to this contribution.

Observers in different parts of the world have suggested various designations to represent the affection, each claiming that the name proposed possessed advantages and should be given preference over former appellations in that it conveyed a more or less adequate intimation of the pathogenesis and pathological histology, *i.e.*: (1) Deciduoma malignum; (2) decidual-cell sarcoma; (3) sarcoma chorio-cellulare; (4) chorio-epithelioma; (5) sarcoma deciduo-cellulare; (6) carcinoma syncytiale, or syncytial carcinoma; (7) chorio-epithelioma malignum; (8) syncytial sarcoma; (9) chorion epithelioma; (10) malignant placentoma; (11) syncytioma malignum.

It is the opinion of the writer that the last-mentioned designation is more appropriate than any hitherto suggested, in that it comes nearer expressing a definite intimation of the pathogenesis and pathological histology, particularly since it is contended that the neoplasm is composed purely of syncytial masses.

Chairi was promptly followed by Tibaldi, Guttenplan, and others, who also recorded instances of a peculiar malignant disease of the uterus developing subsequent to parturition, in all of which the patients perished within a few months; but until the appearance of Sanger's more elaborate description (*Centralblatt für Gynäkologie,* 1889), embracing the histories of three cases observed by himself and reported to the Leipzig Obstetrical Society the previous year, with a résumé of all others recorded up to that time, outlining what he believed to be the probable pathology and suggesting the name deciduoma malignum, little real scientific interest was manifested in the so-called newly discovered surgical affection. However, it cannot be reasonably claimed that the subject has been neglected since that date, as there have been in progress many painstaking investigations, and as a result much valuable information has been contributed to the scientific press within recent years.

Pfeiffer (*Prager med. Wochen.,* 1890) discussed the question of malignant hyatid mole; Sanger again reviewed the entire subject in 1893, and during 1894-5-6 numerous important additions were made to the literature, notably by Gottschalk, Schmorl, Ruge, Pestalozzi, Marchand, Bacon, Frankel, Williams, Paviot, Lohlein, Kussmann, Hartman, Jeannel, Klein, Toupet, Novi-Josserand, Kottnitz, Lebensbaum, Apfelstedt, Eden, Menge, Pesenelli, Superno, Kuppenheim, Tonnen, Schauta, Asthoff, Lounberg, Mannheimer, Morrison, Spencer, Beach, Cazin, Neumann, Monad, Kastrom, and many others.

Marchand in 1895 collected a total of 28 cases thus far recorded. Of these 24 perished from sepsis, peritonitis, hemorrhage, and metastases. Dorland in 1897 (*University Medical Magazine*) mentioned 52 instances of the neoplasm under consideration, with a mortality of 73 per cent. Williams (*American Journal of Obstetrics,* 1898) found record of only 45 well-authenticated examples. None of these occurred in primiparæ, and each developed before the menopause. In seven instances the women were under twenty-five, and the larger percentage were less than thirty years of age. In 45 per cent the neoplasm developed subsequent to hydatid mole.

Durante (*Rev. Med. de la Suisse Romande*) published an exhaustive review of the literature in 1899, as was also done by Marchesi, of Palermo, in 1900, the latter recording (*Annali di Ostet.*) what was said to be the first instance of syncytioma malignum ever observed on the Island of Sicily.

Ladinski in 1902 (*American Journal of Obstetrics*) was able to gather from the literature of the world 132 authentic instances of this neoplasm, many of which (especially the earlier cases) he says were but casually observed, at least imperfectly recorded. Of the total number ten were reported in America, nine in England, the majority of the others in Germany. In 128 cases where pregnancy was mentioned, 51 followed hydatid mole; abortion, 42; labor at term, 28; premature labor, 4; tubal pregnancy, 3. Thus it will be noted that in 40 per cent of cases the neoplasm developed subsequent to mole pregnancy.

While there is great divergence of opinion among pathologists concerning the probable relationship between hydatid mole and syncytioma malignum, the majority of observers agree with Marchand (*Monatschrift für Geb. und Gynäkologie,* 1895), who was among the first to show that hydatid mole is not a true myxoma of the chorionic villi (as was claimed by Virchow *et al.*), but is due to increased growth of the syncytium and a proliferation of Langhans's cells, which produces a mechanical dropsy of the stroma of the chorionic villi. However, whether the mole is actually the result of pathological changes in the ovum, or in the corpus uteri, cannot at present be determined with any degree of accuracy.

The designation deciduoma malignum, primarily suggested by Sanger (*loc. cit.*), was based upon the hypothesis that the neoplasm originated from the decidual cells—*i.e.*, that it was a malignant degeneration of the decidua serotina, and since this structure is probably formed from hyperplastic connective-tissue stroma of the endometrium, the name seemed appropriate. Similar views were entertained by Pfeiffer (*loc. cit.*) and others. In a subsequent dissertation, however, Sanger (*Archiv. für Gynäkologie,* 1893) submitted a study of additional cases and suggested another designation which more accurately expressed his later interpretation of the pathology as revealed by further investigation, viz., sarcoma deciduo-cellulare, believing that the neoplasm was a sarcoma originating from the products of conception. The correctness of this view was seriously questioned by Marchand (*loc. cit.*) and others, whose investigations indicated that

the cells hitherto supposed to be decidual in character were really syncytial (probably maternal epithelium?) or fetal ectodermic (Langhans's?) cells which had undergone malignant proliferation. In this connection, however, it must be admitted that the question whether the syncytial cells are of maternal or fetal origin has never been satisfactorily demonstrated.

Gottschalk (*Archiv. für Gynäkologie,* 1894) proposed as a more appropriate designation sarcoma chorio-cellulare, under the impression that the neoplasm owed its origin to malignant degeneration of the stroma of the chorionic villi.

The majority of observers having accepted the views of Marchand—*i.e.,* that the structure of this neoplasm is composed of epithelial layers of the chorionic villi—persistent effort has been made to determine the true genesis of these layers. Langhans originally held that the outer layer was derived from the fetal ectoblast, the inner layer being a derivative of the mesoderm, but was later induced to believe the outer layer was of maternal and not fetal origin because of the finding of cilia on the outer border of the protoplasmic masses by himself, Klebs, and others. There are three more or less reasonable theories in regard to the derivation of the two layers referred to, which are interpolated as a matter of reference, viz.:

1. Kastcheno's theory, that the two layers are of fetal epithelial origin, but the syncytium is primary, and from it the Langhans cells are formed.

2. The theory of Hubrecht and Duval, who from studies of early placentæ in animals conclude that the cell layer is first and that the syncytium is derived from it.

3. The theory of Strahl, that the Langhans cells are derived from the fetal ectoderm, and that the syncytium comes from the uterine epithelium (Pierce, *American Journal of Obstetrics,* 1902).

As already indicated, the views of Marchand concerning the pathology of syncytioma malignum are at the present time accorded the greatest consideration, and the investigations of Langhans and others on the histology of the chorion, especially the work of Peters and his associates on the early stages of development of the ovum (during its period of implantation), have given the ideas of Marchand ample support. According to his latest views, the neoplasm is composed entirely of tissue arising from the fetal ectoblast, and not of the maternal mesoblast as claimed by other observers; that the fetal ectoblast (or tropho-

blast) gives rise in the developed chorion to a layer of what are known as Langhans's cells, and that these lie upon the stroma of the villus and probably represent the most highly vitalized tissue of the chorion, and from them by the process of differentiation the outer syncytial covering of the villus is derived.[1]

In an attempt to definitely settle the controversy among those engaged in investigating this subject, the London Obstetrical Society in 1896 appointed a commission to determine if possible the pathology of the neoplasm under consideration, and to indicate its proper classification. The verdict was that the neoplasm was nothing more nor less than a sarcoma of the uterus, and it was practically denied that there was necessarily any relationship between it and pregnancy! That the findings and report of this commission were distinctly erroneous there is an enormous mass of indubitable evidence to prove; and it is believed the English school now practically agree with the ideas of their German and American cousins in regard to the pathological histology and classification of syncytioma malignum, by whatever name it may be designated—*i.e.*, (*a*) that it is neither a sarcoma nor a carcinoma, (*b*) that it arises in the syncytium, and (*c*) that it is entitled to the distinction of being classified as a neoplasm *sui generis*.

Veit in 1901 attempted to account for the presence of syncytioma malignum on the hypothesis of its "springing from deported fragments of chorionic tissue escaping into the maternal blood-vessels." This somewhat ingenious theory, like all similar fanciful departures from the strictly scientific in medicine, found ardent advocates; but the proposition appears ridiculous when it is remembered that such "deported fragments" are usually promptly absorbed in the maternal organism in normal as well as pathological conditions; consequently the theory is held as unproven, or at best insufficient, so far as the primary neoplasm is concerned. In justice to its author, however, it must be admitted that since it seems clearly proven the malignant process under consideration is disseminated by the blood current, the metastatic developments might technically be the result of "deported fragments escaping into the maternal blood-vessels."

[1]In this connection it is interesting to remember that the so-called cells of Langhans are almost invariably found present in syncytioma malignum, according to the statements of most observers. They are called the "invaders," but in both the primary and metastatic growths syncytial derivatives are found in abundance.—Q. W. H.

Some of the most careful observers are of the opinion that what appear to be individual (giant) cells in various parts of the neoplasm (*i.e.,* the cells containing several nuclei) are in reality only cross-sections of masses of syncytial protoplasm containing free nuclei. If this view be correct, then the most reasonable inference is that all varieties of the malignant neoplastic cells present may be referred to a syncytial origin, and after careful scrutiny of accumulated data the writer believes this represents the truth as nearly as it can be ascertained from information thus far adduced.

According to Williams (*loc. cit.*) the most prominent histological features of the neoplasm are:

1. A fibrous reticulum resembling organized blood, in the meshes of which are large spaces containing blood and fibrin, but no glands, blood-vessels, or lymphatics.

2. Bars, bands, and islands of syncytial and Langhans cells between the blood spaces, and in masses throughout the growth.

3. Vacuoles in the syncytial protoplasm, and in some cases distinct chorionic villi.

4. A small round-cell infiltration in the fibrous reticulum, and also in the homogenous protoplasm, is also conspicuously present.

Kelly and Teacher (*Journal of Pathology and Bacteriology*) suggest that in view of the epithelial origin of the neoplasm, the manner in which it infiltrates the adjacent structures, and the secondary involvement of the lymphatic glands connected with the primary growth, it appears to have much more affinity with carcinoma than with sarcoma; though the manner in which it spreads by the blood-stream directly and at an early period is more characteristic of sarcoma. On the whole they agree with Marchand and others that it should be regarded as a neoplasm *sui generis.*

There are, it would appear, five more or less distinct theories to account for the origin of syncytioma malignum, each based upon but slightly different conceptions of the pathological histology, viz.:

1. The theories of Sanger that the neoplasm is either the result (*a*) of malignant changes in the decidual cells, or (*b*) that it is a sarcoma developing from the products of conception.

2. The theory of English observers that it is a sarcoma of connective tissue origin the elements of which exist in the uterus independently of pregnancy.

3. The theory of Chalezky that death of the embryo is the

cause, the chorion in consequence receiving nutrition intended for the fetus.

4. The theory of Marchand that it is due to a malignant proliferation of the epithelial layers of the chorionic villi.

5. The view held by a large number of others that the neoplasm arises in the syncytium and is composed of purely syncytial masses, that it is in no way related to either sarcoma or carcinoma, that it is a neoplasm *sui generis*.

It seems to have been definitely shown by conscientious and competent observers that the first, second, and third theories are based upon distinctly erroneous premises, and likewise that the fourth is only partially true. The fifth, however, differs in no essential respect from the fourth, except its advocates do not concur in the statement that the neoplasm arises in the epithelial layers of the chorionic villi, or that it is *per se* an epithelioma, but insist that it is composed purely of syncytial masses. The syncytium is a structure (probably maternal) lying between the decidua and chorionic villi over the layer of Langhans's cells, and the neoplasm owes its origin to this structure, not to Langhans's cells, or the epithelial covering of the chorionic villi. It must not be forgotten in this connection that as the origin of the syncytium, and likewise Langhans's cell layer, remains unsettled it cannot be definitely stated whether syncytioma malignum originates in fetal or in maternal structures—it may be in both.

It is unfortunate that there should exist so much confusion and divergence of opinion concerning the pathology and classification of this neoplasm, as controversy only tends to impede scientific progress. "Even one of the latest medical lexicons defines the affection thus: An intra-uterine neoplasm formed mainly of connective tissue elements, and arising, apparently, from the remains of the decidua of a pregnancy which has been terminated by an abortion!" This is certainly far from the truth, as in only an inconsiderable number of instances has the neoplasm followed abortion, the majority developing subsequent to the expulsion of hydatid moles. Pregnancy is an absolute precursory condition, according to most authors, and has preceded the neoplasm in all recorded instances (Ladinski) with the exception of one (Paviot), and the history of that case is exceedingly questionable from the standpoint of reliability.[1]

[1]This statement was evidently made in the belief that the neoplasm was unknown to occur in other parts of the body, a position which has since been proven incorrect, according to the evidence of competent observers. *Vide* case reported by Fisch, etc.—Q. W. H.

Ladinski (*loc. cit.*) remarks that there is on record no instance in which syncytioma malignum developed outside the parturient age, but such a case is reported by McCann (*Journal of Obstetrics and Gynecology*, 1903), a brief abstract of which may not be uninteresting in this connection on account of its rarity: "The patient, aged fifty-three, mother of ten children, sought relief from severe uterine hemorrhage which had recurred every few days for four months. Menstruation had ceased eighteen months previously. Examination revealed uterus uniformly enlarged, soft, freely movable. Introduction of sound caused markedly increased hemorrhage. Vaginal hysterectomy two days later; death in six days. Investigation showed uterus filled with blood-clot, evidence of new growth between clot and uterine wall. The neoplasm was composed of multinucleated masses of protoplasm and loosely reticulated tissue containing in its meshwork cells with deeply staining nuclei; remainder of section fibrin and blood-clot. It was regarded as a typical example of syncytioma malignum."

The average age at which the neoplasm developed (Ladinski) in 124 cases was thirty-two years; average number of pregnancies in 90 cases, 4.2; average time when the neoplasm appeared after mole pregnancy in 44 cases, eight weeks; after abortion in 40 cases, seven weeks; after labor at term in 29 cases, five weeks. One of its principal characteristics is a marked tendency to early metastasis, the secondary development frequently exceeding the primary neoplasm in its growth. Metastatic deposits consist of elements similar to those composing the primary tumor, and have been found (Ladinski) in the following organs in the order of their frequency: Lungs, 47 cases; vagina, 40; liver, 13; spleen, 13; kidneys, 13; ovaries, 10; intestine, 8; brain, 7; broad ligament, 5; pleura, 4; mesenteric glands, 3; pancreas, 2; heart, 1; stomach, 1; pelvic lymphatic glands, 1. And because of its rapid development, its marked tendency to early metastasis and recurrence, it is the most fatal of all malignant neoplasms. In 124 cases the records show 73 deaths, or a mortality of 59 per cent, the causes of death being metastases 45, hemorrhage and exhaustion 20, perforation of the uterus 4, operative shock and sepsis 4. Of 66 patients subjected to radical operation 50 recovered.

Of Williams's 45 cases, 20 were operated upon; 3 perished as an immediate result of the operation; 3 others succumbed within six months from metastases; the other 14 remained free from symptoms. All patients the subjects of this neoplasm

promptly perish unless submitted to early radical surgical intervention, and according to Eiermann's statistics death occurs in most instances within six months whether the patients are operated upon or not!

It would appear that a definition of syncytioma malignum more appropriate than any heretofore suggested would be: A malignant process developing usually within the corpus uteri subsequent to pregnancy, arising in the syncytium probably at the placental site, showing a marked tendency to metastasis, advancing with great rapidity, and almost invariably leading to a fatal termination within a few months. In view of present knowledge it would also be necessary to specify that neoplasms exactly similar in histological structure may occur in other parts of the body, and even in the male.

The neoplasm is ordinarily of placental consistence—*i.e.*, soft, friable, easily broken down and removed by the finger or curette; the uterine wall is early invaded by the malignant process, becoming softened and readily perforated. There is usually persistent recurrent metrorrhagia, often resulting in profound, even mortal, anemia.

The most important clinical features observed are:

1. History of parturition, abortion, extrusion of hydatid mole, or retention of placental fragments.

2. Irregular uterine hemorrhage not amenable to treatment, even recurring despite repeated curettement; presence of more or less constant sanguineous discharge.

3. Enlarged hyperplastic uterus and cervix, with persistently patulous os.

4. Localized pelvic pain may or may not be present.

5. Profound, rapidly increasing anemia, loss of flesh, diminution of strength, cachexia.

6. Evidence of metastatic deposits, particularly in the vagina and lungs, the latter inducing cough and bloody expectoration.

7. A characteristic nodule may in some instances be detected in the corpus uteri even during the early stages.

Inasmuch as in 40 to 50 per cent of cases syncytioma malignum develops subsequent to mole pregnancy, it would be interesting to determine, were it possible to do so, (*a*) why such gestations are apparently more likely to be followed by development of this neoplasm, and (*b*) why in certain instances malignancy supervenes, whereas in others the mole is extruded promptly and is followed by no abnormal phenomena. However,

owing to the present unsettled and unsatisfactory state of knowledge concerning the entire subject, it is manifestly impossible to even suggest a reasonable explanation. Butz (quoted by Pierce, *loc. cit.*), commenting upon the statistics cited by Neumann, observes:

1. Malignancy does not lie in the inward proliferation of the syncytial elements as claimed by Neumann.

2. The peculiarity of the case described by him was in showing small villous processes and a scarcity of mole vesicles.

3. Where the mole is only partially extruded spontaneously, the remainder being removed in pieces by curette or finger, the liability to malignancy is greater than where the mole is expelled entire.

4. Specimens from the curettement in his case showed a proliferation of fetal cells into the depths of the mucous membrane no further than is observed after normal birth, but in much larger quantity.

5. Malignancy lies in disease of the uterus, not in the mole itself.

Horrocks (London Obstetrical Society) thought there were two kinds of malignant growths associated with pregnancy, viz., one of decidual (*i.e.*, maternal) origin, which is sarcomatous; the other a chorion epithelioma of fetal origin, which is carcinomatous. Haultain considered the finding of syncytial masses in uterine scrapings, especially just after expulsion of a mole, no justification for such radical treatment as hysterectomy, since fragments retained might show no tendency to malignancy and simple curetting might be quite sufficient. Neoplasms presenting exactly similar histological appearances have developed in females who had never been pregnant, even in males, and in various parts of the body.

Frankel (London Obstetrical Society) suggests that as hydatid moles have been complicated with bilateral ovarian cystoma in certain instances, this fact would tend to prove the ovigenous origin of these moles. While as stated such phenomena may have been repeatedly observed, his suggestion certainly proves nothing and is only mentioned for what it may be worth.

Metcalf and Safford (*American Journal of Obstetrics,* 1904) believe syncytioma malignum belongs to a distinct class of neoplasms, apparently differing from the carcinomata and sarcomata. It is generally related to a mole or recent pregnancy, but some investigators have determined that the characteristic tissue may

be found independently, for instance in certain teratomata of the ovary, and even in corresponding tumors of the testis. Along the same lines Teacher (*American Journal of Obstetrics,* 1903) concludes:

1. That the so-called deciduoma malignum is a tumor arising in connection with pregnancy and originating from the chorion epithelium (or its forerunner, the trophoblast), which is of fetal epiblastic origin. (It will be noted this is only a repetition of the theory of Marchand.)

2. That these tumors form quite a characteristic group clinically, pathologically, and developmentally, and that they should be classified neither as sarcomata nor as carcinomata, but as a distinct group *sui generis.* Malignant hydatiform mole may be treated as a variety of this disease.

3. That in addition to the common tumors developing from the pregnancy, there are tumors containing precisely similar structures which are not connected with pregnancy, and may grow in other parts of the body than the uterus, and in either sex. The most probable explanation of them is that they are teratomata, originating from some structure which has the morphological value of an included ovum, and the chorion epitheliomatous tissues represent an actual trophoblast (chorionic epithelium) and the included ovum.

Lockyer (*Practitioner,* 1904) discusses the neoplasm with especial reference to its association with lutein cysts and excessive lutein reaction. In four instances he found an excess of lutein tissue, and in three others, although the ovaries were regarded as normal (lutein cysts being absent), the solid ovarian stroma was strewn with lutein cells. He concludes that in estimating the amount of lutein tissue present no help is to be obtained from observations with the naked eye. These cases were cited in favor of the theory of Pick, which is that where lutein cells are in excess their internal secretion produces a reaction upon the developing ovum, converting it into a mole. This is certainly a most ingenious theory, but in the opinion of the writer is insusceptible of either intelligent understanding, adequate demonstration, or reasonable proof.

With further reference to the observation that neoplasms corresponding in every morphological and pathological detail to syncytioma malignum, as noted in the corpus uteri subsequent to parturition, have been demonstrated in other parts of the body of the female and also in the male: Fisch (*Interstate Medical*

Journal, 1906) in an article on "Chorion Epithelioma in a Male" suggests that the peculiar histology and fatally malignant growth of this neoplasm have been the incentives for numerous investigations resulting in the generally accepted opinion of an origin from epithelium of the fetal coverings and villi. Normally this epithelium destroys maternal tissue, enters into the blood-vessels, in normal pregnancy is carried with the circulation into various organs of the maternal economy, and is always to be found in the pulmonary capillaries. Under normal conditions this transplantation does not give rise to tumor formation, since the cells are resorbed. It is probable that as a rule resistance of the maternal organism is sufficient to ward off any danger from this parasitism. Under certain circumstances, however, this resistance yields, the fetal cells are able to assert their innate proliferative capacity, they become malignant, and no resistance being met with use the pabulum offered them, thus destroying vital tissues of the providing organism. Morphologically and physiologically the cells of a normal chorion and those of a chorion epithelioma cannot be differentiated; they are absolutely alike, only varying in the degree of the respect they hold toward the tissues in which they live. Thus the fetal epithelium after pregnancy finds in the maternal body a favorable soil; it is free from limitation caused by enrolment into the whole of the developing fetus, and avails itself thereof by unlimited growth and proliferation.

It has only been a few years since the attention of pathologists was first directed to neoplasms developing in other parts of the body than the uterus and in males, which could not be explained except as tumors of identical character—*i.e.*, syncytioma malignum, or the so-called chorion epithelioma. Undoubtedly similar observations had been previously made, but the findings were incorrectly interpreted under the biased conviction that such neoplasms could develop only in the female uterus subsequent to pregnancy. The researches of Pick, Schlagenhauffer, and others, confirming the classical studies and investigations of Wilms, have clearly demonstrated the existence of this neoplasm in rare instances in the male sex. There have been twenty-one such cases recorded. Frank collected nineteen, and Nicholson and Fisch have reported one each. As an example the writer presents a brief abstract of the case recorded by Fisch (*loc. cit.*):

"The patient, a male, aged twenty-six years, consulted the

author in regard to a tumor of the right testicle which had been gradually increasing in size for six months. The growth was hard, the overlying skin reddish-blue in color and freely movable over the enlargement. There was no pain, but mechanical inconvenience from presence of the tumor was considerable. Further investigation revealed consolidation of the larger portion of both lungs, only the upper lobes (mainly the left side) appearing to be free. Temperature only slightly elevated, cough and bloody expectoration present. Examination of the sputum for tubercle bacilli negative. As the general condition of the patient was good, it was considered justifiable to remove the enlarged testicle, which was promptly accomplished. Microscopically the neoplasm presented a picture at once reminding one of a syncytium—*i.e.*, only fields of clotted blood with areas of a whitish color could be seen. No normal portions of the testicle could be detected. Careful microscopic examination proved the neoplasm to be a typical (so-called) chorion epithelioma.

"No improvement followed the operation; on the contrary, the patient became progressively worse; there was rapid emaciation, dyspnea, hematuria, paralysis, and death supervened five weeks from the date of operation. Necropsy confirmed the provisional ante-mortem diagnosis. There were extensive metastases into the lungs, kidneys, lymphatics, bronchial and tracheal glands, and the brain. The findings resembled those observed in a number of other similar instances, and were identical with those noted in cases of death from chorion epithelioma after pregnancy. The histologic structure of the neoplasm and the character of the lesions were the same down to the finest cytologic details, even to the ciliary fringe of the syncytial masses."

ACCORDING to *Die Umschau,* the average yearly increase in the number of suicides in Germany between 1881 and 1897 was 20 per cent. In Prussia alone, where the population increased in that period by 30 per cent, the number of suicides rose from 3075 to 7217. Between 1898 and 1900 it is estimated that there were in the whole of Germany 200 suicides per million of population. The corresponding rate was in Prussia, 190; in Bavaria, 180; in Saxony, 300; and in the Duchy of Saxe-Coburg-Gotha, 420. It is added that suicide is three times more frequent in men than in women, and is more common between the ages of twenty and twenty-five.

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EDITORIAL ARTICLES.

THE ORIGIN OF CANCER IN AUSTRALIA.

The number of theories that have been advanced in regard to the etiology of cancer have been many and varied. A new theory has been put forth by a writer in a recent issue of the *Lancet,* G. C. Adams of Australia, regarding the etiology of the disease in that country. The views put forth by this writer are that cancer is not due to a bacterial or parasitic origin, but that it is a constitutional disease due to a specific or malignant virus originating in the blood and chiefly manifesting itself after thirty-five years of age, and at its greatest virulence between fifty and seventy years of age. The writer believes that the disease may be congenital, and certain forms are acquired by infection and contagion. The principal factor in the cause is a hereditary tendency, and the principal exciting factor is a prolonged local irritation acting on a constitution suffering from an inherited tendency, or one which has been debilitated through want of treatment of one or the other of the following diseases in their order of frequency: syphilis, alcoholism, obesity, rheumatism, gout, or tuberculous disease. Adams is of the opinion that the principal dietetic factors in the cause are sugar, beer, and alcohol, and that the principal hygienic factors in the cause are woods and forests, whose dropping foliage, decomposing, causes stagnation of water; also badly formed streets and defective drainage in cities, and the overcrowded, badly housed and fed population of cities.

Adams says that cancer is a preventable disease, and the cure is only to be found in the means for preventing its exciting causes and completely removing the same. He says that the sanitary

indigenous foliage of the natural orders (*a*) Myrtaceæ, (*b*) Lauraceæ, and (*c*) Compereæ appears to exert a specific influence in rendering the native-born population of the countries where they grow almost immune from malignant diseases other than might be caused by prolonged local irritation. The writer strongly urges the avoidance of all internal and local treatment, more particularly such local treatment as the *x*-rays and Finsen's light, as it is likely to set up secondary conditions around the site of the lesion. Far better, he thinks, is early and prompt removal where the malignant growth is accessible.

This writer's views are certainly at variance with those of the majority of the profession, but as no one has yet demonstrated the true cause of cancer he is entitled to the credit for the study he has made of this most interesting question. His urging the prompt removal of all accessible growths is one which all are agreed upon at the present time.

EDITORIAL NOTES.

Appendectomy an Hour After Childbirth.

The removal of the appendix during pregnancy has of late years become a rather frequent operation, but its removal immediately following labor we do not believe has hitherto been reported. A writer, F. W. Hooper, in the *Intercolonial Medical Journal of Australasia* of a recent date, has reported the case of a woman, aged thirty-two years, who was expecting her fourth confinement on February 16, 1906. On February 6 he saw her at 9.30 A.M. She was quite well, but as she was anxious he performed abdominal palpation, and ascertained that the child was in the left occipitoanterior position. He examined both iliac fossæ without finding any pain. The patient took a dose of castor oil, which acted satisfactorily, but was followed twice by vomiting. At 3 P.M. she was in considerable pain and was certain that labor had begun, but the nurse was equally convinced that the pain was unlike that of labor. At 4 P.M. Dr. Hooper saw the patient and was struck by her altered appearance. She was lying on the left side with the right knee drawn up, the face pale-gray, and the expression anxious. The pulse was 120, and the temperature was 99° F. There was slight headache and distinct nausea. The patient was afraid to move, because the slightest movement of the right leg produced great pain in the lower abdo-

men. McBurney's point was very tender. There were no signs of labor, even on vaginal examination. Acute appendicitis was diagnosed. A consultation with two other practitioners was held, and it was decided to operate without waiting for the onset of labor or of suppuration. However, she was left in charge of the nurse for the night, who had orders to report immediately any change. On the following morning the tenderness at McBurney's point persisted, and some swelling was found there. She was removed to hospital for operation, but on the way labor began. She arrived at 11.30 A.M. From 1 until 3.30 P.M., when the child was born, she was kept under chloroform. At 4 P.M. Dr. Hooper slowly expressed the placenta. A distinct but not very tender mass could be felt in the position of the appendix. At 4.15 laparotomy was performed. The appendix was found adherent to the omentum and was removed. It was very large and of a greenish-gray color. It would have ruptured if not gently handled. The patient rallied well, and except for a mild attack of phlebitis recovery was uninterrupted.

Salicylic Acid as a Food Preservative.

As a result of his observations on his "poison squad" Dr. H. W. Wiley, chief chemist of the Department of Agriculture, has recently issued his report. Of the twelve men upon whom the preservatives were tried, three were ill, more or less, during the progress of the experiment. Food was supplied sufficient to satisfy the ordinary demands of hunger and thirst. The diet was so varied as to give a choice of meats and vegetables, with bread, butter, milk, coffee, and tea. Dr. Wiley reached the conclusion that salicylic acid and salicylates exert a harmful and depressing influence upon the digestive organs of the human body. Its use as a preservative for foods, he adds, is reprehensible in every respect, and leads to injury to the consumer, which may be productive of great harm. Dr. Wiley claims there is no necessity for its use as a preservative, as the same result can be accomplished by the use of less objectionable chemicals. Dr. Wiley's investigation indicated that the use of salicylic acid is followed by a stimulating effect upon the digestive organs, and there is also an increased appetite. This hunger is only temporary, and is accompanied by a feeling of heaviness and uneasiness in the upper and front portion of the stomach. The use of salicylic acid produced in the members of the poison squad an increase in the number

of red corpuscles and a slight increase in the white corpuscles. The investigation proved, however, that the intensity of the color of the blood diminishes. After the effects of the acid wear off there is a decrease in the number of both red and white corpuscles.

Medical Fees.

That the average layman has an erroneous idea in regard to medical fees is well illustrated by a recent editorial in that well known magazine, *World's Work*. The writer of the editorial makes the statement that it has become difficult for the best part of the people of the United States—the well-to-do class who are neither rich nor poor—to receive the best medical and surgical service, for as a rule as soon as a physician or a surgeon becomes famous he sets his fees so high that none but the rich class can pay them, and so the self-respecting man of moderate income must take greater risk at the hands of the less skilful. Such statements are most absurd, for while it is true that many practitioners have to raise their fees to prevent themselves from being overburdened with work, there still remain in every community many competent men who, not having so many patients in the course of the day, charge very moderate fees. Simply because a physician charges an exorbitant fee for his work does not mean that he is by any means superior in skill to many of his fellow practitioners.

The Dust Problem.

The dust problem is one that will not down. Despite all that has been said of late years of the menace dust is to the health of communities the public seems to care little or nothing how dirty and dusty the streets are. There is agreement among authorities that the sputum expectorated by consumptives and becoming dried and powdered constitutes the principal means by which infection is extended. The seriousness of the situation is increased by the fact ascertained by competent observers that the vitality of the infecting germ endures unimpaired for months. The recent summer, which was hot and dry, has left for the autumn winds great quantities of dust to be blown into the faces of pedestrians in all large cities. The matter is one that ought to command every energy of municipal health boards towards its abatement.

ITEMS AND NOTES.

Malaria used to kill 15,000 persons a year in Italy. In 1902 state quinine was introduced, and last year the mortality fell to 7835.

Ground has been broken in Edmonton, N. W. T., for the erection of a hospital for contagious diseases. It will be erected by the authorities of the town.

According to the *American Machinist* about forty city smoke inspectors held a convention in Detroit recently for the purpose of forming a National Association of Smoke Inspectors.

It is intended by the editors of *Annals of Otology, Rhinology and Laryngology* to issue a special Fraenkel Festschrift of the annals (400 to 500 pages) this month, on the occasion of his seventieth birthday anniversary.

The death is reported from Frankfort, Ky., of a colored woman named Anne Jane Mitchell, who was fatally burned at the age of 117 years on October 11. Her husband, who died recently, is stated to have been a centenarian.

The school of medicine for women in Moscow seems to be very popular among female candidates for the profession. About a thousand applications have been received, but the school has accommodation only for one hundred and fifty.

An American physician who formerly practiced in El Paso, Texas, was recently convicted in Mexico, in conjunction with two other men, of having insured the lives of two men and murdering them to collect the insurance money. All of them have been sentenced to be shot, and the sentence has been confirmed by the supreme court.

Owing to the continued appearance of new cases of yellow fever, Governor Magoon has declared the districts of Cruces, Vanchula, Palmira, and Lajos, near Cienfuegos, to be an infected zone. Passenger trains running between Cruces and the other three towns will carry physicians, who will make inspections of the passengers *en route*. A detention camp will be established at Cruces, where non-immunes will be subjected to five days' observation before they will be permitted to leave the infected zone.

THE Brussels School of Tropical Medicine, founded by King Leopold, was formally opened on October 16. Its principal object is the study of sleeping sickness. Dr. Van Campenhout, head of the Colonial Sanatorium at Watermael, is to be the director. It is intended that the school shall work in coöperation with the corresponding schools of London and Liverpool.

A FRENCH paper says that there are 228,234 medical men in the world. Of these there are in Europe 162,333, distributed as follows: In England, 34,967; in Germany, 22,518; in Russia, 21,489; in France, 20,348; and in Italy, 18,245. In England the proportion of doctors is 78 to 100,000 of the population; in France it is 51, and in Turkey 18. In Brussels it is 241, in Madrid 209, in Budapest 198, in Christiania 181, in Vienna 140, in Berlin 132, in London 128, in Athens 123, and in Paris 111.

THE immigration authorities have discovered at Philadelphia what they believe to have been a conspiracy to land in this country large numbers of Armenians who are now in London, all of whom, it is alleged, are suffering with trachoma. Three Armenians have been indicted in Philadelphia for attempting to bribe an immigration inspector through whose intervention it was hoped to introduce into the country the diseased immigrants. The Commission of Immigration estimates that there are in the neighborhood of 10,000 cases of trachoma among the aliens of New York.

AMONG the members of the medical profession in foreign countries who have recently died are Dr. Josef Weinlechner, emeritus professor of surgery in the University of Vienna, aged 77; Dr. Francesco Roncali, professor of mental diseases in the University of Bologna, and director of the lunatic asylum of that city, aged 72; Surgeon-General Professor Krocker, editor of the *Deutsche milit. aerztliche Zeitung*, aged 60; Dr. Friedrich Straschnow, the oldest of the Franzenbad physicians, aged 79; and Dr. Hermann Hertzka, a well-known Vienna specialist in children's diseases, aged 57.

THE report of the Honduras health officials recently published indicates that the campaign against yellow fever in that country has met with great success. It is stated that precautions have been carried almost to extremes, houses of the poor in some cases having been burned to destroy filth, and new houses having been supplied in their places. Frequently clothing worn by beggars has been burned, better and cleaner material replacing the burned

garments. Cisterns have been screened, and sulphur has been burned indoors and petroleum spread over the surface of stagnant pools. Weeds have been destroyed in great quantities. As a result, in communities where last year fifty or more cases of yellow fever were reported not one case has developed during the last two months.

The *Novoe Vremya* relates that, owing to the intelligence that an individual wanted by the police is being treated in one of the Moscow hospitals, instructions were received from St. Petersburg that these institutions were to be searched by the police. The search was made, but without the desired result. A striking incident occurred at the University Psychiatric Clinic, named after Morossoff, where the presiding official, Professor Serbsky, positively refused to allow the police to carry out their search on the ground that the bustle would excite his patients. The city governor proposed that the police should enter the clinic disguised so as to meet the scruples of the professor. But he would have none of the compromise, so his clinic had to be entered by force. It is added that at the Ekaterinsk infirmary the appearance of the police produced a state of wild alarm amongst the patients, and the director of the institution is making a complaint to the governor on the subject.

According to the recent report of the registrar-general for Ontario for the year 1904, when there was a population in Ontario of 2,203,768, the births numbered 50,265, which included 1690 still-births. The birth-rate was therefore 22.8 per 1000, an increase of 0.7 over 1903. Still-births are steadily growing in number in Ontario, as the following will show: In 1897 there were 435; 1898, 532; 1899, 419; 1900, 578; 1901, 780; 1902, 823; 1903, 933; and 1904, 1690. In the face of the fact that all the still-births are not registered the many instances of infanticide unearthed by the police of Ontario during the last two or three years lead to the suspicion on the part of the provincial authorities that there has been a sort of campaign of murder, and the matter is now receiving investigation at the hands of the law officers of the province. The number of children born out of wedlock in 1904 was 798. There were fewer marriages than in the previous year, the total number being 19,789. The report, which deals so closely with infantile mortality, also referred to the deaths in the province in 1904, which numbered 30,920, a rate of 14.1 per 1000.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Radical Cure of Aneurism.

R. Matas (*Journal of the American Medical Association,* Sept. 29, 1906) gives the history of his operation of intrasaccular suture, and remarks that in spite of his efforts to elucidate the general principles and method of the operation a good deal of misapprehension still seems to exist. He here describes the operation as consisting of two fundamental procedures: (1) The obliteration by suture of the vascular orifices which open into the aneurismal sac; (2) the obliteration of the sac by suture, which brings its inner surfaces in apposition, or by other methods which leave the sac undisturbed and tend to secure primary healing. In obliterating the vascular orifices that supply the sac, the parent trunk which nourishes the aneurism may be preserved or obliterated at the point of attachment, according to the type of sac encountered. Hence the subdivision into two varieties:

"1. Obliterative endoaneurismorrhaphy (the fundamental procedure) essentially consists in opening the sac freely without disturbing it from its surroundings, and closing all visible arterial orifices within the sac by suture, thus securing complete hemostasis and permanently stopping all further access of blood into the aneurismal cavity. The sac is obliterated by approximating its walls with buried sutures and closing the wound, with or without drainage; or, in rigid cavities, by simply infolding the overlying skin flaps and lining the cavity with them (capitonnage of the French), or by one of the several procedures or variations I have suggested." This method is indicated in all aneurisms in which the sac is of a fusiform type in which there are two or more orifices of supply, and in which the parent artery is entirely lost at the seat of the aneurism by blending with the aneurismal sac throughout its circumference. In these cases no attempt is made to restore the continuity of the parent artery. The blood-stream is interrupted in that part of the vessel directly opening into the

sac, to which all sources of blood-supply are cut off by suture. Twenty-two of the American cases reported are of this operation.

"2. Restorative endoaneurismorrhaphy. This variation in the procedure is solely applicable to aneurisms of the sacciform type, in which the parent trunk retains its continuity and normal outline, and the aneurism is a sac simply grafted on the vessel. By opening the sac freely and washing out the clot the opening leading to the artery is exposed inside the aneurism, and is readily closed by a continued suture which penetrates through all the coats of the sac at the margin of the orifice of communication. By this procedure the blood-supply of the sac is permanently arrested, the lumen of the parent artery remains patulous, and the arterial stream supplying the limb or dependent territory is immediately restored through its normal channel. The sac is then obliterated by bringing its endothelial surfaces together with buried sutures, and the surface wound is closed in the usual manner. Up to the present time seven operations of this type have been reported by American surgeons, all successful, and two at least of the foreign cases may be appropriately added to this list, making nine in all.

"3. Reconstructive endoaneurismorrhaphy (arterioplasty) is applicable solely to fusiform aneurisms in which the coats of the sac are firm and resistant, and the two openings leading to the main artery lie on the same level, in close proximity, and are situated at the bottom of a superficial or readily accessible sac. In aneurisms of this type; especially those of traumatic origin, the continuity of the parent artery may be restored by making a new channel out of the sac walls, which can be brought together by suture over a guide (catheter or drainage-tube) inserted into the proximal and distal openings of the aneurism. Before tying the last sutures the guide is removed and the channel is left behind, corresponding to the outline of the original artery. The sac is then obliterated by approximating its surfaces with buried catgut suture, as previously applied in the first and second procedures."

Thus far five cases of this operation have been reported, all by American surgeons. Two of these patients have relapsed, and in one of these he thinks the amputation which followed might have been saved had a secondary obliterative operation been performed. A summary of the heretofore recorded and well-attested cases of these operations is given.

Femoral Herniotomy.

A. J. Ochsner (*Journal of the American Medical Association,* Sept. 8, 1906) claims that all that is required in the treatment of femoral hernia with the normal circular opening of the femoral canal is to dissect out carefully the hernial sac quite into the peritoneal cavity beyond the inner surface of the femoral ring, ligate it high up, cut it off, and permit the stump to withdraw within the peritoneal cavity. Removing all the fat contained in the femoral canal and simply closing the skin wound completes the operation. The method is based on the well-known fact that it is practically impossible to keep a circular opening in any part of the body from closing spontaneously unless it be lined with a mucous or serous membrane. In cases in which the opening is congenitally not circular or is torn in traumatic hernia, or is cut in strangulated cases, this method of course is not indicated. He has used this method constantly for fourteen years, and finds that, barring unusual accidents, recurrences do not happen. He tabulates the cases thus operated on from which he has been able to obtain definite reports, thirty in number, and in none of these was there a recurrence. He reviews the principal features of the more important methods used in femoral hernia, some of them in detail, and concludes that every one of them that does not utilize the principle here emphasized of leaving the femoral canal in the form of a circular cavity is faulty.

Axioms in the Treatment of Cancer of the Rectum.

Chas. B. Kelsey (*Medical Record,* Oct. 6, 1906) believes that in every suitable case of cancer of the rectum the patient should be subjected to immediate excision or resection by some one of the half-dozen well-recognized varieties of the operation. Every other case should be treated at once by colostomy. As operable cases he considers such only as allow of complete removal of the disease with no more risk than attends any other major surgical operation. The mortality-rate depends upon the choice of cases and upon the operator. But no matter what its form, cancer of the intestine is an unsatisfactory disease. In some cases recurrence is cured when the original operation was not successful. There is no one operation that is applicable to all cases. The site of the growth must be the controlling factor. The writer then gives an outline of the method which he has found satisfactory for many years. The greatest of all palliatives for cancer of the rectum is colostomy.

MEDICINE.

The Relation of Weight to Measurement of Children During the First Year.

E. C. Fleischner (*Archives of Pediatrics,* October, 1906) says that the height and circumference of head, chest, and abdomen in normal, well-nourished children increase with the weight, the greatest increase in the measurements occurring during the first quarter of the year, when the greatest gain in the weight takes place; the next greatest increase in the measurement occurs coincident with the gain in the weight during the second quarter of the year; while the least increase in the measurements takes place in that part of the year when the gain in the weight is least, the third quarter of the year. The height, and the circumference of the head and chest, in fairly well-nourished children likewise increase primarily with the weight, although in this class of patients age plays more of a part than in the well-nourished. The greatest increase in measurement occurs in the first quarter of the year, with a similar gain in the weight. The increase in the height and circumference of the head is slightly greater in the third quarter than in the second quarter, although the gain in weight during these periods is the same, showing the slight bearing that age, irrespective of weight, has on the growth of the body, while the smallest gain in the weight and the growth is in the last quarter of the year. It is in the poorly nourished children that age plays its most important part, and the measurements of these children, compared with the well-nourished, increase most rapidly in the last part of the year. In the poorly-nourished children, most of whom are probably somewhat premature, when the weight is below normal all the measurements are correspondingly below normal. The height and circumference of the head reach the normal birth measurements a little ahead of the weight, while the chest and abdomen are two months later in reaching the measurements of a normal child at birth. When the weight is stationary the increase in the measurements is very small, depending upon the slight influence which age has upon the growth of the infant notwithstanding the weight. The measurements of infants of the same weight, notwithstanding the age, are very similar, the small difference depending, as when the weight of a child is stationary, upon the very slight influence of age upon growth.

The final conclusion can be drawn that during the first year of life the primary factor in the increase of the measurements of the body is steady, consistent increase in the weight, the influence of age being secondary, and much less important.

Tuberculosis.

H. M. Bracken (*Journal of Minnesota State Medical Association,* Sept. 15, 1906) says that an early diagnosis of the disease must be made; in this the responsibility is about equally divided between the patient and the physician. The education of the people, in order that they may know that tuberculosis is both a preventable and a curable disease. The recognition of the fact that the general practitioner and the sanitary authorities must work together in the care of those cases which have become centers of the infection, viz., cases with the tubercle bacillus present in the sputum. The necessity for the proper care of tuberculous patients either at their homes or in sanatoria, in order to prevent the infection of others. The necessity of considering the protection of the uninfected as an important factor in the control of tuberculosis. The even greater necessity of caring for advanced or incurable cases than for the mild curable ones, if the disease is to be brought under control. The creation of conditions to meet all requirements in the care of the tuberculous, embracing sanatoria, district nursing, dispensaries, etc. The formation of antituberculosis organizations, to take an interest in raising funds and in aiding in providing for the proper care of the tuberculous. The recognition of the fact that medication is but a small factor in the control of tuberculosis, while good hygienic surroundings for the patient, together with the proper prophylactic measures for the uninfected, are of the greatest importance in the control of this disease.

The Absorption of Fats in Infants.

T. P. Shaw (*British Medical Journal,* Oct. 13, 1906) says that about four per cent in nurslings and five per cent in bottle-fed infants of the fat ingested appears in the feces. The fat found in the feces is to a great extent fat that has escaped digestion. The fatty compounds in the feces exist as neutral fat, fatty acids, and soaps. The fatty acids are usually in excess of the other two constituents. The soaps are relatively increased in artificially-fed infants, in infants with a low percentage of fat in the food, and in infants with diarrhea.

THERAPEUTICS.

Dietetics of Obesity.

First among the methods of reducing obesity, according to A. C. Croftan (*Journal of the American Medical Association,* Sept. 15, 1906), is diet, and second to this is the regulation of muscular exercise. These means can be reënforced by hydrotherapeutic and medicinal measures. The latter, however, come chiefly into play in the symptomatic treatment of the complications of obesity. He quotes a German writer in classifying obesity into three degrees—the enviable, the comical, and the pitiable. The first practically requires no correction, the only effort to be made being to prevent its passing into the other stages. The other two require more or less active measures to cause a loss of fat. It is convenient, he says, to arrange three degrees of reduction cures. In the first, caloric requirements are reduced to four-fifths of the normal, in the second to three-fifths, and in the third to two-fifths. Thus in an individual normally requiring 2500 calories the food should have a caloric value of 2000, in the second degree of 1500, and in the third degree of 1000 calories. The four-fifths diet is useful mainly in preventing the increase of fat in persons inclined to obesity. It is suitable for continued use, is easily borne, and requires no special calculations. It is usually sufficient to allow meat only once a day, to reduce the amount of starchy and sweet foods somewhat, to restrict or to forbid alcoholics, and to limit the liquid intake generally to from one to one and one-fourth liters daily, using also filling food of small caloric value. The second degree is also suitable for continuous use and should be adopted for strong, fat individuals who cannot at once stand the third degree of reduction cure. This last, when taken, should be under the supervision of a physician and in an institution. Unlike the other two the weight reduction is rapid, and it is specially dangerous in very young or old people. The popular banting cures, etc., are of this type, and therefore dangerous and to be condemned.

The question as to the amount of each food constituent in reduction cures, proteid, fat, or carbohydrate, is discussed, and the general rule laid down that the individual should receive an amount of albuminous food incorporating from 60 to 80 grammes of albumin to keep up the nitrogen equilibrium and to protect the

tissue albumins. The remaining number of calories required may be supplied by carbohydrates and fats, the former, especially if they are voluminous, being given the preference. The restriction of liquids to one or one and one-half liters a day is of value, but its effects are not of themselves permanent.

The special articles of diet are mentioned. Alcohol should be included in the calculation if used. It should be allowed to patients who have been accustomed to it, so as not to rob the heart at once of its accustomed stimulus. Lean meats, plainly prepared—that is, roasted, broiled, or stewed, without rich sauces or gravies—are preferable. Milk is useful provided its caloric value and water are estimated. Thin soups are useful, for their caloric value is practically *nil*. Articles made of flour or rice, except bread in small quantity, carefully weighed and its caloric value calculated, and small amounts of potatoes may be allowed in the first and second degrees of reduction cure. Vegetable foods growing underground or in pods are useful. They should be served only boiled in salt water, without the addition of butter, flour, or cream. The indiscriminate use of mineral waters is condemned by Croftan, though they may have a certain psychologic value. These patients often do well at mineral springs and cures, but the good effect is mainly due to the regulated diet, which the patients undergo more willingly at a watering-place than at home.

The Bath Treatment of Typhoid Fever in Private Practice.

Simon Baruch (*Medical Record*, Oct. 13, 1906) declares that in the management of a case of typhoid fever the chief aim of the physician should be the enhancement of the patient's resisting capacity to the toxemia which threatens his life. The damage sustained by the nerve centers is the measure by which the mildness or severity of a case of typhoid fever is gauged. Cold baths must not be regarded as cooling procedures. Cold baths prevent lethal complications by reason of their sustaining effects upon the central nervous and circulatory systems. There must be reaction following each application. By baths, nerve force must be sustained to prevent exhaustion. The cold bath has proven an efficient aid in changing the mortality statistics. The form of the bath and its temperature must be adapted to the condition of the patient.

GYNECOLOGY AND OBSTETRICS.

Apparent Phlegmasia Alba Dolens of Uterine Origin.

R. Kiriac (*British Gynecological Journal,* August, 1906) holds that edema of any considerable extent does not occur unless there is some obstruction in the veins, and in regard to the transitory partial edema, which according to Budin is sometimes seen in the puerperium, which is of short duration and to be attributed to the influence of toxins, Kiriac supposes that there is a blocking of the smaller venous branches of a kind not sufficient to cause phlegmasia alba dolens, but giving rise to edematous changes, which disappear comparatively quickly. He gives the history of several cases observed by himself in which edematous swellings developed in the legs after the uterus had been curetted in consequence of retention of the placenta after abortion. In one of these cases incautious movements during convalescence resulted in sudden fatal embolism. In the treatment of such edema it is of the chiefest importance to keep the affected limb in absolute repose and surrounded by warm, wet compresses. Only after some weeks, when every trace of swelling or pain has disappeared, should any movement be permitted.

Torsion and Laceration of Uterus by a Pedunculated Fibroid.

R. Reeb (*Monatschr. f. Geb. u. Gyn.,* July, 1906) recently exhibited before a medical society a uterus which had undergone axial rotation to 360 degrees, caused by a big pedunculated subserous myoma. The bladder was not involved. The anterior wall of the uterus was completely torn through, so that the uterine and peritoneal cavities communicated. The posterior wall was greatly thinned; the fundus and left appendages were swollen and infiltrated with blood. The patient was a thin woman, sixty-two years old; the torsion occurred a few days before the operation, as she was gathering firewood. The symptoms indicated torsion of a tumor, but the true condition was not diagnosed. The uterus was amputated above the cervix, and the elderly patient recovered.

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ORIGINAL CONTRIBUTIONS.

THROMBOSIS OF THE POPLITEAL ARTERY COMPLICATING TYPHOID FEVER.

BY WILLIAM C. PIERCE, M.D., WILMINGTON, DELAWARE.

Arterial thrombosis and embolism are occasional complications of typhoid fever. They occur most frequently during the second or third week, during the period of greatest cardiac weakness. Arterial thrombosis is the result of an obliterating endarteritis, involving all the coats of the vessel, with formation of a thrombus. The endarteritis is considered to be due to the specific typhoid infection. Embolism of the arteries, on the other hand, is simply the result of fragmentation and detachment of clots formed in a weakened and dilated heart. Hagem and Keen believe that the arterial obstruction is more often due to embolism than to thrombosis. If the obliteration of the vessel is complete and permanent, it is followed by dry gangrene of the parts supplied by the artery.

Gangrene is a very serious complication of typhoid fever. Fortunately, it is very rare, and many observers of large clinical and pathological experience have never met with a case. Keen, however, has been able to collect 115 cases of spontaneous gangrene, complicating or following typhoid fever. The date of onset is most commonly during the third week of the fever or early in convalescence. The earliest time at which gangrene has occurred, according to Keen's investigations, is on the fourteenth day, and the latest is in the seventh week.

The chief factors in the production of gangrene are the weakened action of the heart and the sluggish peripheral circu-

lation. To these must be added the influence of the typhoid bacillus in promoting the coagulation of the blood, which is the cause of the obstruction in the vessels. The gangrene may be either dry or moist. If the obstruction is arterial, whether due to embolism or to thrombosis, the gangrene is of the dry variety. When the obstruction is in the veins, it results, as a rule, in moist gangrene.

Occasionally there is obstruction of both the arteries and veins, and in such cases there may be a combination of both dry and moist gangrene. Age does not seem to have a marked influence in determining the occurrence of gangrene. Of 140 cases, there were 26 cases under fifteen years, 64 between fifteen and twenty-five, and 50 over twenty-five years. As Keen observes, this does not differ much from the normal age distribution of typhoid fever. The influence of sex is more marked. Of 155 cases, there were 90 males and 65 females, or about three males to two females.

Gangrene is especially apt to affect the lower extremities, also other peripheral regions of the circulatory system, such as the nose and ears.

The genitals also are frequently involved. Keen lays especial stress upon this distribution of gangrene. Of 214 cases in which the location is stated, in 126 it was in the legs, in 25 in the genitals and anus, in 16 in the nose and ears, leaving only 46 in which the face, neck, arms, and trunk were affected. These figures support Keen in his contention that the sluggish peripheral circulation rather than the bacterial infection is the chief agency in the production of gangrene. When the gangrene is of arterial origin, the two sides of the body are equally affected. When it is due to obstruction in the veins, the left side is much more frequently involved, for, as we have seen, venous thrombosis occurs on that side in the large majority of cases.

A case of arterial thrombosis followed by gangrene of the leg, complicating typhoid fever, having come under our observation, I desire to report the same, for the purpose of illustrating this very rare and serious complication.

August 26, 1905, called at 8 P.M. to attend N. B., white male, aged thirty-eight years; born in Russia; occupation, foreman in morocco factory. Found the above had been confined to bed for two weeks, under a physician's care and treatment for typhoid fever. On learning the attending physician had been dismissed, we proceeded to make an examination. Patient's hair and eyes

dark; face anemic, showing evidence of continued illness, but general nutrition fairly good. Temperature, 102.4°; pulse, 130, weak, small; tongue fairly clean. Abdomen prominent and somewhat distended; no spots; no tenderness on pressure. Examination of the lower limbs showed the chief cause for anxiety on the part of the patient and his family. Inspection of left leg revealed marked discoloration from the knee down—leg, foot, and toes. The skin was very dry, smooth, leather-like to the touch, shining, without feeling; the discoloration varying from black on the toes to dark-brown and gray at the knee-joint. The discolored parts emitted a distinctly unpleasant odor. On further inquiry we learned that four days previous the patient had complained of painful sensations in the back of the leg in the region of the upper calf muscles, and with his complaining the leg began to show signs of discoloration, which rapidly and progressively increased, until after four days the condition was such as we have described.

Recognizing the gravity of the case, and that the outcome meant either the loss of the leg or the patient's life, or both, we informed the family in so far as we thought wise, and advised consultation. Accordingly at 10 P.M. the same night we had Dr. John Palmer, Jr., see the patient with us. We agreed upon the diagnosis to be one of dry gangrene, and advised amputation at the lower third of the thigh at such time in the near future when the patient's strength and general condition would warrant.

The family not being reconciled to such an opinion, desired to call into consultation Prof. J. Chalmers Da Costa, of Philadelphia, professor of surgery in the Jefferson Medical College; and in complying with their wishes we had him see the case with us the next day at 4.30 P.M.

After hearing the history of the case Dr. Da Costa proceeded to make a thorough examination of the patient, and noted first of all that there was no pulse in the popliteal artery on the left leg. He made comment on the abrupt onset as brought out by the history of pain in the leg four days before, followed by discoloration and other marked changes in the circulation of the leg. Examination of the heart showed weakened second sound, radial pulse small and feeble. Examination of urine showed absence of sugar. At this consultation we learned from the patient's family that he had been complaining of feeling ill a week or more before he took to his bed, would take medicine and remain at home for a day, and then return to his work the next; and from

what we could learn his symptoms had been not unlike a walking typhoid for some time before he consulted a physician. After a general conference we decided the case to be one of typhoid fever complicated by thrombosis of the popliteal artery, producing dry gangrene of the leg below the knee. The prognosis was extremely grave; to save the leg was impossible; the man's life was a matter of grave doubt. Treatment consisted of active stimulation internally; externally the leg was bandaged with gauze, wet with chloral hydrate solution, then packed with cotton-batting, and dry heat applied by the liberal use of hot-water bottles. The foot of the bed was elevated four inches.

Early in the morning of August 28 we saw this case again, and found that he had been in active delirium through the night and difficult to restrain. We found evidence of septic infection, absorption taking place rapidly from the gangrenous leg. The patient showed extreme exhaustion, with failing pulse and falling temperature.

By means of sedatives and the services of a trained nurse we made his last hours as easy as possible.

As the day wore on his delirium was followed by general convulsions, with failure of all his vital powers, and terminated in death at 4.30 P.M. There was no autopsy. It may be well to add in review of this case that our diagnosis was reached after careful consideration of all the possible features that might bear upon it.

There had been no history of traumatism. There was no evidence of sugar in the urine. It was not then a case of diabetic gangrene, although such an opinion might have been held at first when one recalls the tendency of the Hebrew race toward diabetes, for this patient was a Russian Hebrew. This man was in good circumstances, and was able to enjoy the usual comforts of life. There was nothing unfavorable in his occupation. The line of demarcation was not clear at any time in the case.

If our report should seem incomplete or lacking materially in detail, it must be remembered that we came into the case late, and that the events leading up to the termination were rapid in action, such as would prevent us from making a more careful report.

INFLUENCE OF THE DAILY PRESS AS AN INCENTIVE TO SUICIDE AND OTHER CRIMES.

BY C. C. MAPES, COVINGTON, KENTUCKY.

At the outset the writer desires to frankly state that no attempt will be made in this address to develop sensational facts in relation to the commission of suicide or crime of any name or character, nor will he present anything especially new or original. The major portion of the information presented, collected from available sources, excerpted and epitomized to suit the occasion, is given for what it may be worth.

Many articles have been reviewed, and it is manifestly impossible to extend due credit to each author whose ideas in epitomized form are utilized, but the names of most of the publications consulted will be found in the appended list of references.

Statistics show that during the year 1891 there were recorded in the United States 3531 instances of *felo de se*. In 1903 the number increased to 8507. While it may be admitted that 8500 persons out of a total population of over eighty millions would practically not be missed, yet when it is considered that for such a number to commit suicide it is as if a moderate-sized city had by its own volition within the space of one year consigned itself to annihilation, the statement becomes more impressive.

Of 77,617 suicides recorded in this country during the thirteen years of which 1891 was the first, 57,317 were men; but the increase is said to be greatest among women. Fifty years ago five times as many men as women killed themselves; twenty-five years ago the proportion was three to one; now it is two and a half to one. Of the 77,617 suicides in the thirteen years noted, 61,933 used either poison or the pistol. Previous to 1894 shooting was most in favor; since then poison has headed the fatal list. Of those who did not use poison or pistol, 2976 hanged themselves, 6091 committed suicide by drowning, 4447 used the knife, 809 jumped in front of locomotives, 763 leaped from roofs and windows, 294 sought death by fire, 77 used dynamite, and 227 found individual methods too numerous to be mentioned.

France shows an increase in suicides in twenty-five years from 15.7 per 100,000 inhabitants to a ratio of 22.4. Among foreign cities, rating by the 100,000, the Dresden latest suicide figures are 51, Paris 42, Berlin 36, Vienna 28, Stockholm 27,

London 23. Russia, "the country of oppression and depression," shows no increase in the suicide rate.

Another authority declares that suicides in France have more than quintupled in the last seventy-five years, and in commenting on these figures makes the suggestive statement that it has been demonstrated that imitation presides in all the forms of human activity, and imitation, it is claimed, is a moral contagion. The abnormal forms of this activity, whatever they may be, always find a certain number of ill-balanced minds which lay hold of these abnormal forms with avidity. It is curious—and also alarming—that suicide is developing and multiplying precisely like a contagious malady, which tends to become epidemic.

In a study on suicide Durkheim has shown that the number of those who have killed themselves from 1826 to 1890 has increased 411 per cent in Prussia, 385 per cent in France, 318 per cent in Austria, 238 per cent in Saxony, 212 per cent in Belgium, 72 per cent in Sweden, and 35 per cent in Denmark. During twenty years the increase was 109 per cent in Italy.

It seems well established that suicide is much less prevalent among married than unmarried persons. For example, while there were 975 suicides out of a million of unmarried people, there were but 614 out of a million of married persons without children, and 336 out of the same number of persons with children. Nearly four times as many divorced persons as married persons of both sexes kill themselves. This difference, however, is inconstant. Finally, says one author, in discussing the causes of *felo de se,* it is reasonable to admit, with all the moralists, the influence of religious convictions, the weakening of which in our age allows imitation to exercise its power with entire "tranquillity of conscience."

During August, 1897, an epidemic of suicides occurred in Paris. The item from which the information is obtained reads as follows: "There has been a veritable epidemic of suicide in Paris for some weeks past, the recent tropical heat adding to the number of cases. Almost daily one or more women have committed suicide, and the self-murder of men has been equally numerous. The bodies of men are found daily hanging to trees in the Bois de Vincennes. In one alley of that part alone six bodies of suicides were found during the past week, and the morgue is so full of dead bodies found in the river Seine that there is no further room for them."

Statistics for 1902 show that Vienna is among the front ranks of the European capitals in the number of suicides. The

records show that there were 452 suicides and 467 attempted cases. The number of women suicides increased in ten years from 57 to 124.

The number of suicides throughout the world is said to be about 180,000 yearly. The greatest number happen in the month of June, the fewest in the month of September, and nearly one-half between six o'clock in the morning and noon. Suicide is rare after the age of seventy-five years; the largest percentage of cases occur between the ages of twenty-five and forty; it is unusual under ten years.

The sad fact that suicide and education increase at an equal rate is now generally admitted. Civilization does not free humanity from grief, disgrace, and disappointment; but wherever civilization is highest the struggle for existence is fiercest, life is most artificial, and there the most failures of the human race are met with. There was a time in Roman history when suicide was almost epidemic. It was when the great republic had reached its acme of civilization—when poetry, art, and eloquence were triumphant. It is probable that the proportion of suicides due to mental derangements is increasing, but how rapidly can never be exactly determined. Morselli claims that about one-third of all suicides may be attributed to insanity. The statistics of Ogle show that one out of every 119 young men who reach the age of nineteen years dies ultimately by his own hand; and one out of every 312 girls who reach the age of fifteen years meets the same fate, as it has been demonstrated that not quite three men kill themselves to one woman.

The foregoing extracts from statistics will certainly suffice to convince the most optimistic that suicide is markedly increasing among all civilized peoples, and it has been said that the spread of the alphabet is coincident with that of self-murder. The savage rarely takes his own life. Where the standard of education is lowest the fewest instances of *felo de se* are found, although this is probably untrue concerning the commission of other crimes.

The causes of suicide would appear to be more numerous even than the means and methods employed to accomplish the act; but as a discussion of all the supposed causative factors in detail would not be within the intent and scope of this article, only one will be considered *in extenso,* viz., the influence of the daily press.

While no serious claim is made to priority, the writer believes he was among the first to call especial attention to the pernicious

influence exerted by the daily press as an incentive to suicide, in an address published in the MEDICAL AGE, Detroit, Michigan, in 1896, from which a few excerpts may be permissible:

"It is important that all manner of crime, suicides, etc., be recorded in the archives of the municipality, county, or State in which they are committed, for ready reference in case of necessity, as mortuary statistics are recorded and preserved by health authorities; but that elaborated, exaggerated, even truthless reports, with flashing headlines and other conspicuous accompaniments detailing every murder, suicide, hanging, seduction, attempted rape, elopement, robbery, scandal, divorce, etc., etc., are accorded simultaneous publication in almost every great secular daily of the country—to poison the public mind, corrupt public morals, to act by the influence of example upon the morbid and melancholic as an incentive to the commission of other similar crimes, to suggest to and familiarize the public with the *modus operandi* by which such crimes have been committed, thus stimulating and perpetuating lawlessness, licentiousness, and the customary concomitant evils and inevitable sequelæ especially in those individuals possessing susceptible, excitable natures and inherent criminal tendencies—appears in the nature of a national calamity, which should by some means be suppressed. The evil has been nourished and stimulated until such reports are now generally considered as legitimate reading matter; they are published even to the minutest detail, such as would obtain were the composite matter related to some scientific, hygienic, or sanitary subject; and in this fact lies the most unfortunate feature. Little harm would perhaps result if only brief notices were inserted, but it is the unlimited freedom exercised, the minuteness of detail as to the method employed in the commission of crime, the exaggeration depending upon the imaginative genius of the reporter delegated to this class of work, which must be recognized as the most deplorable constituent.

"The daily newspaper reaches all classes of society, from the highest to the lowest; it is perused by wives and children, though often more demoralizing and productive of more evil than the foulest yellow-covered monstrosity ever perpetrated by the ingenious imagination of an irresponsible author; yet the daily press is admitted to every home in the community and received with open arms, while the lesser evil, the yellow-backed literature, is denied admittance. While the writer would not be understood as advocating or encouraging questionable literature in any form, or favoring its introduction into the home and extensive circu-

lation in this or any other country, his contention is that, judged by its pernicious effect upon the morals of any community, the daily press is the chief offender.

"As an incentive to suicide, the effect of the daily press may be emphasized by the following: Recently, in a neighboring city, a man aged fifty-seven years, being despondent, out of work, and "tired of life," committed suicide by swallowing a quantity of carbolic acid. The morning's paper published the customary two- or three-column account of the unfortunate circumstance, with flashing double 'scare' headlines—chiefly gratuitous on the part of the ingenious and imaginative reporter, life being extinct when the suicide was discovered, so that *facts* were absolutely unobtainable. What was the result? In the same city, during the next succeeding seventy-two hours, five additional human lives were cut short by identically the same method, plus in some instances the additions outlined by the reporter, the subjects ranging in age from nineteen to sixty-five years. Is not, then, the assertion warranted, that the depressing effect of the glaring published account of the first suicide, upon the morbid and impressionable minds of the additional five, prompted them to end their existence and to adopt the same means; and may it not also be assumed that in the first instance the man in a fit of despondency was actuated to the deed by having read in the daily press the report of a suicide by similar measures?

"As already intimated, the newspapers are not content to publish brief notices of local crime, suicide, etc., but the circumstances are magnified and distorted until a proper degree of sensationalism is reached, in proportion to the intensity of the pernicious and lying element and the prominence of the individual or persons connected therewith, and then transmitted to every daily in the land; thus the demoralizing effect, instead of being confined within the narrowest limits, is made general!

"Many other instances might be cited as evidence that suicide has undoubtedly been actuated by the daily press, but is further illustration necessary? It has frequently been remarked that suicides 'come in schools,' following the same identical methods, whether aided by pistol, knife, noose, poison, or what not; and if the influence of the daily press in promoting the same is what it appears, or is assumed to be, is it any less criminal because intended to minister to appetites depraved? Is not the public press thereby guilty of a degree of murder? Can it be doubted this is the influence that causes suicides to so frequently follow each other in quick succession, especially when it is found the

death-dealing method and even the anatomical region attacked are identical in each instance? Surely such instances are of too frequent occurrence to be considered merely matters of coincidence.

"And this refers with equal force to a long list of crimes. It is by no means uncommon for robbery, burglary, or other criminal accidents in any one certain locality to be quickly followed by others. Attempted rape, seduction, murder, are doubtless influenced to a greater or less extent by suggestive and exaggerated published accounts; and is it not true that no small percentage of these reports are entitled to be classed as obscene literature, and thus be brought under the jurisdiction of laws governing such matters?—for details *suggested,* leaving the working out thereof to the imagination, are far more dangerous in their prurience than a bald and nasty account. If this be admitted, what excuse can be offered that no action has been instituted with the view of suppressing this class of literature? Do not, or cannot, the laws be made to apply to the secular press as well as to other publications? And yet the most pernicious issues of the secular press are accepted for general and local transmission through the regular mails, whereas the same literature in another form would be rejected and the parties offering it prosecuted. Where is the justice, *de jure* or *de facto?*"

Herold says that trashy novels and all kinds of unwholesome, sentimental literature constitute very important predisposing incentives to the commission of *felo de se* in this country, but nowhere in his writings does he mention the influence of the daily press; at least if he has ever accused or referred to the secular press in this connection it has escaped the notice of the writer. He declared that there was an average of four suicides a day in the city of New York for a week recently, and yet in enumerating the supposed predisposing causes the incentive furnished by glaringly published accounts of other similar acts in the daily press is allowed to pass unobserved.

The coroner of one of our large cities recently made the statement that the publication of suicide stories under glaring headlines, giving every detail of the crime, is most harmful to the public at large, and is the direct cause of many other suicides; that he had noticed when the details of a suicide, for instance, by carbolic acid was printed, a number of additional suicides immediately followed in the same manner; that the same might also be said of suicide by shooting or any of the other methods commonly employed.

It is said that the highest official of one of the States in the Union recently gave as his principal reason for approving a bill which had been introduced in the legislature, the object of which was not only to suppress the publication of details concerning the commission of suicides and other crimes, but making the owners of such papers responsible for their utterances, and stipulating the penalties for violating the law, that the deaths of presidents and other similar personages were directly traceable to inflammatory utterances of the newspapers. The bill was bitterly fought, it is said, by the secular press of the commonwealth, but was finally passed, and as indicated duly approved by the State. In a lengthy opinion concerning the advisability and wisdom of enacting such a law the official referred to claimed that within the last quarter of a century two presidents of the United States have been murdered, and in each instance the cause was easily traced to the inflammatory and careless newspaper utterances. Also that many years' experience on the bench had led him to the conclusion that crimes are widely propagated not by the malice but by the recklessness of the press, and in certain classes of cases, among them murder, the accused were at times convicted or acquitted before they reached the court room.

A bill was introduced at Washington by a representative from one of the most enlightened States, not very long ago, making newspapers and other periodicals unmailable if such papers contained the stories of suicides or details relating to suicides beyond a simple statement of death by suicide, and imposing a suitable penalty for violation of the provisions thereof. The writer is uninformed as to whether this bill was acted upon favorably or unfavorably, but if there is such a law in effect he is unaware of the fact. If the bill was passed and became a law, for some reason it appears to be inoperative or ineffective.

It is well known that the mentally unbalanced are easily led by suggestions. The sight of a weapon suggests its use. A newspaper account of a suicide, with all the details, whys and wherefores, and the minutiæ of preparation and consummation of the act, leads some one else to the thought, and another suicide is added to the list. This has been noted for many years, and the publicity given the occurrence in the daily press, while not entirely responsible for it, has a great leaning upon it. Not only is suicide itself epidemic, but the means of its commission are often the same for what might be termed the special epidemic. If less publicity were given to these cases, there can be no doubt so-called epidemics of suicide would not occur.

Davis, after stating that there are about 10,000 suicides per year in the United States, and enumerating the common causes leading to the act, says one more factor remains to be considered, viz., the lay press. How artistically are the descriptions given with pencil and camera! How eagerly do people read the thrilling and revolting details, column after column, and gloat over the horrid account; some readers, a little warped in their nervous systems, whose impulses are like skittish horses and ready to run, are so fascinated with the story that sooner or later they imitate exactly what they have read so hungrily! Many and many a time has such a description directly led to other suicides.

Not long ago a peculiarly horrible murder was committed in a country town near Cincinnati; the whole neighborhood was acquainted, and many of the people related through kinship to the victim and members of her family, and wide-spread interest in the affair was natural. As the time for trial of the perpetrators approached, the enterprising newspapers deputed their most able reporters and artists for the work; one paper, more active than the others, even established a private telegraph wire to the scene of the trial. Papers were filled with full details, descriptions, photographs of the surroundings, the suspects, the victim, and others connected with the proceedings. The whole country was saturated with the fullest and most minute information regarding the horrible details. The trial finally ended, but the terrible results of the newspaper enterprise did not soon cease; there were several suicides, and at least two persons driven insane, among those who carefully followed the details. It seems to the writer that all these sequelæ can reasonably be charged to the excessive, exaggerated, and unwarranted notoriety given the case through the medium of the daily press.

The philanthropist, the moralist, and the social reformer may suggest measures for suppressing evil, but something more substantial than mere suggestion is necessary to enforce actual suppression. The legal aspect may be threatening, but something more than threat is required to produce the desired results. That there are abundant reasons why the daily press should be prohibited from publishing elaborate reports of murders, suicides, and other crimes is patent; but the means by which this result may be accomplished are not so evident. Recourse to the law is probably the only measure of relief, as the publisher will not otherwise discontinue a practice upon which he claims his financial success largely depends.

The question then arises: If there are no laws which ade-

quately cover the case, or if present laws are inadequate, cannot proper legal enactments be secured, or cannot present statutes be so amended as to universally cover the point at issue, making the discontinuance of such practice imperative? Individual effort, it is true, can accomplish little, but by joint action of the moralist, the statesman, the philanthropist, the social reformer, and the physician, certainly an improvement in existing conditions might be effected.

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The *American Practitioner and News, Popular Science Monthly,* the MEDICAL AGE, *Louisville Courier-Journal, Cincinnati Enquirer, Cincinnati Commercial-Tribune,* the *Literary Digest,* the *Medical Times, American Medico-Surgical Bulletin, Carolina Medical Journal, Journal of the American Medical Association, New York World, Gaillard's Medical Journal, Louisville Times, Detroit Medical Journal, Colorado Medical Journal, Medical Council, Alienist and Neurologist.*

THE International Conference recently held at Berne for the purpose of regulating the employment of women at night and the use of white phosphorus in the manufacture of matches was attended by delegates from fourteen countries. A convention to prohibit the use, importation, or sale of matches made with white phosphorus was signed by the representatives of the following seven states: Denmark, France, Germany, Holland, Italy, Luxembourg, and Switzerland. A convention was also signed whereby a minimum period of eleven hours' repose for women is insured. This period includes the time from 10 P.M. to 5 A.M. to women employed in all industrial enterprises where there are more than ten workers of both sexes. The convention will take effect in two years' time.

AFTER an existence of eighteen years, the Tri-State Medical Association of Tennessee, Alabama, and Georgia, at its last meeting, held at Chattanooga on October 5, relinquished its charter, and was replaced by the Southern Medical Association. The new organization comprises Mississippi, Tennessee, Georgia, Alabama, Florida, and Louisiana, and it is expected that the Carolinas and Kentucky will ultimately be included. The newly elected officers are: President, Dr. H. H. Martin, of Savannah, Georgia; first vice-president, Dr. Mack Rogers, of Birmingham, Alabama; second vice-president, Dr. J. B. Cowan, of Tullahoma, Tennessee; third vice-president, Dr. J. R. Tackert, of Meridian, Mississippi; secretary, Dr. Raymond Wallace, of Chattanooga; treasurer, Dr. Y. L. Abernathy, of Chattanooga.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

HYPODERMIC INJECTION OF VACCINE.

The usual method of vaccinating an individual by scarifying the arm and rubbing the abrased surface with a point has in a great many instances caused much trouble, owing to the ugly sore produced. Recently an English physician (G. Noble) has experimented extensively as to the effect of hypodermic injections of vaccine. In a communication to the *British Medical Journal* of a recent date he details his results. In 74 children who had previously not been vaccinated, 0.1 to 0.2 Cc. of calf lymph diluted with sterile normal saline solution in proportions varying between 1 in 166 and 1 in 16 was injected deeply beneath the skin of the arm, a sterile needle, 4 centimeters in length, being inserted as far as the mount. Until the tenth day after the injection there were no local changes, and the skin and subcutaneous tissue remained normal. After this period, often on the twelfth or fourteenth day, a circumscribed or diffuse swelling of the size of a hazelnut or cherry appeared at the site of the injected lymph. If, as was the rule, the needle had been inserted at two places about one inch apart, the two swellings became confluent. Usually the overlying skin became adherent and reddened. A few days later the hard swellings became more circumscribed, and the skin could be freely moved over them, but weeks elapsed before all traces of the infiltrated parts had disappeared. In no case did suppuration or necrosis occur, and the general symptoms were not more severe than in ordinary vaccination. In two cases postvaccinal papular urticaria occurred. In a few cases typical vaccine had no appreciable influence. In three cases in which a subcutaneous reaction was absent, subsequent vaccination by scarification also failed. Possibly there was congenital immunity.

As regards the power of subcutaneous injection of vaccine to produce immunity, subsequent vaccination by the usual scarification in cases injected with vaccine invariably succeeded up to the ninth day and ran a perfectly normal course; but from the tenth day onward it invariably failed. Cutaneous vaccination, if performed before the appearance of the subcutaneous nodules, shortened the incubation period of the latter, though the presence of the subcutaneous nodules had no effect before the tenth day. If ordinary vaccination and hypodermic injection of vaccine were performed simultaneously the superficial pustulation ran a perfectly normal course, but the subcutaneous changes failed to appear. Thus, cutaneous vaccination usually produces immunity in the seventh or eighth day, and subcutaneous injection of lymph never prevents cutaneous pustulation before the tenth day. Evidently, therefore, the absence of local changes in the subcutaneous tissue depends on the modifying influence of the cutaneous vaccination.

The writer concludes that the smallest traces of lymph injected hypodermically produce immunity. The hypodermic method has the following advantages: (1) The dose is more easily regulated; (2) the local reaction is much milder; (3) if performed aseptically, secondary infection is impossible; (4) autoinoculation (for example, by scratching) is excluded; and (5) no cicatrices are produced. But before the hypodermic method is generally adopted it must be certain that immunity is invariably produced, and that the duration of immunity is at least equal to that which follows cutaneous vaccination.

EDITORIAL NOTES.

Employment for Consumptive Girls.

The question as to what employment without danger to the community can be recommended for consumptive girls obliged to earn their own living is one which is very difficult to answer satisfactorily. The problem is one of great practical importance, but by no means easy to solve. In the first place, the occupations open to women are not so varied as those from which men may select their employment, and as competition is keen, ill-health is almost in itself sufficient to spoil a girl's chance of getting a post. Most occupations for women entail indoor and sedentary work, and are, therefore, unsuitable for those with consumption.

Domestic service in a good house, where hygienic requirements are attended to in the servants' quarters as well as in the rest of the house, would not be unsuitable for the early consumptive; but a consumptive girl might be a source of danger to her fellow servants, especially if she could not have a bedroom to herself. The nursemaid's place with daily walks would be beneficial to the consumptive girl, but she is debarred from taking such a situation because of the risks to the children. In the country there are outdoor occupations suitable for women, but since no consumptive should have anything to do with handling milk or food, dairy work is not open to consumptive girls. Tending poultry is also not free from objection. A suitable employment would seem to be light gardening, but there is at present little opening in this direction for girls. Lace-making, which can be done in the open air, would be probably satisfactory from the health point of view, and profitable to those who had learned the work. Net-braiding at seaside places offers suitable occupation, since the nets must be spread out, and therefore large sheds are necessary when the work is not done in the open. The reply to the question appears, unfortunately, to be summed up in the unsatisfactory conclusion that there are no thoroughly suitable occupations for consumptive girls in large towns, and very few such in the country. On the other hand, it is to be remembered that many consumptive girls improve and keep well while following occupations which are theoretically most unsuitable, and in spite of most unfavorable surroundings both at home and at their work.

Constitutional Headaches.

Under this head G. L. Walton, of Boston (*Journal of the American Medical Association,* Nov. 10, 1906), discusses the headaches complained of by neurotic individuals, often presenting physical and mental degenerative stigmata, and which are resistant to treatment, although organic or toxic causes cannot be discovered. The correction of ocular or nasal defects or of uterine deviations, etc., is also negative as regards relief of the headache. It is, he thinks, perhaps not what a perfectly normal person would call a headache, but is rather a sort of uncomfortable sensation that has become so irksome by the focusing of the patient's attention on it that at last only such terms as agonizing or excruciating seem adequate to describe it. The sense of mental fatigue, for example, may be more acutely realized

than by the ordinary individual, besides being really aggravated by the patient's inability to relax the mental activity. These patients are irritably sensitive and self-conscious, and the headache is only another sign of general degenerative deviation. The dividing line between this variety and the reflex headaches is perhaps not sharply drawn, and there are doubtless many cases in which the two elements, constitutional and reflex, are so combined and interdependent as to make the distinction difficult. The treatment of constitutional headache is not very hopeful, since a cure demands an entire change in the patient's make-up, including susceptibility to fatigue. Walton advises the correction of ocular, nasal, and other defects, to give the benefit of the doubt as to a possible reflex factor. It is well, he states, to build up the patient's general condition not only by medicines, but also by all other available means. If mental training can aid in the modification of the obsessive tendency, a step is made in the right direction.

Diphtheria in Chicago, Before and After the Use of Antitoxin.

The remarkable efficacy of diphtheria antitoxin is shown by statements made in a recent number of the Bulletin of the Chicago Health Department: "On October 5, 1895, the department treated its first case of diphtheria with antitoxin. During the previous ten years, 1886 to 1895 inclusive, there had been 10,019 deaths reported from diphtheria—an average rate of 9.87 per ten thousand of population. During the succeeding ten years, 1896 to 1905 inclusive, there have been 6446 deaths reported from diphtheria—an average rate of 3.94 per ten thousand of population. Had the previous average diphtheria rate obtained during the last ten years there would have been 9701 more deaths from diphtheria in the city of Chicago than actually did occur. This is really an under-statement of the case. Prior to 1895 more than 90 (92.4) per cent of the deaths attributed to croup were, in fact, caused by diphtheria, as is shown by the figures of the last ten years, during which the difference between croup and diphtheria has been bacteriologically demonstrated. During these last ten years of more accurate diagnosis the death-rate from croup has been 0.30 per ten thousand. During the preceding ten years, when diphtheria was so frequently called 'croup,' the croup rate was 4.12, or 13.7 times greater. The point is that, notwithstanding 92.4 per cent of the deaths formerly attributed to 'croup'

have been properly charged to diphtheria during the last ten years, the diphtheria death-rate has been decreased by 60 per cent, and the rate from both diphtheria and croup combined has decreased 70.2 per cent."

Stovaine.

Clinical experience in the Italian schools continues to justify the expectations with which some three years ago stovaine was ushered into practice by the French pharmacologist Fourneau. In a review of its effects Dr. Ernesto Mancini (*Lancet,* Oct. 25, 1906) holds that, its toxicity being twofold less than that of cocaine, it exerts on the heart no detrimental action whatever: nay, in doses not excessive it may safely be exhibited as a cardiac tonic. Its bactericidal virtues are already admitted, destroying as it does within five minutes all the germs contained in a highly impure water to which a solution of it in the proportion of 25 per 1000 has been added. Confirming its anesthetic power, Dr. Mancini shows how thoroughly it can induce insensibility in the lower half of the body when injected into the vertebral column at the level of the lumbar vertebræ, the anesthesia remaining for forty minutes unimpaired without the untoward concomitants of cocaine and leaving the surgeon ample time to complete his operation. In eye affections such as cataract and strabismus, in the various forms of gastralgia, in the neuralgias, and in dental pain it adds an aid to treatment as safe as it is certain, obviating all the discomforts, not to say terrors, formerly associated with clinical intervention.

Subcutaneous Emphysema During Labor.

A. Gilles (*Prov. Méd.,* Aug. 25, 1906) reported a case of the above to the Clinical Anatomical Society of Toulouse. A primipara, thirty years of age, after about three hours of the second stage of labor, felt suddenly, during a strong expulsive effort, a sensation of tearing in the thorax, which was followed immediately by an enormous distention of the skin of the neck and face. Aphonia and some slight embarrassment in swallowing accompanied this manifestation, and the doctor on his arrival was able to diagnose at once what had occurred, aided by the characteristic crepitation. Labor was terminated by instrumental interference, and the emphysema soon disappeared, although the crepitation could be perceived for some time afterward on careful palpation.

ITEMS AND NOTES.

The French government has begun to form a collection of phonographic records of voices of famous singers. This will be preserved in a museum.

A despatch from Vienna announces that the inmates of the new insane asylum at Maueroeling, one of the largest in the world, have started a newspaper.

As a sequel to the recent Austrian army maneuvers in the eastern parts of the empire, a serious outbreak of typhoid fever occurred amongst regiments returning to their usual quarters in the capital.

A sanitary institute has recently been founded in St. Petersburg for the scientific study of water-supply, drainage, the hygiene of dwellings, and other questions connected with the public health.

Dr. George V. N. Dearborn, professor of physiology in Tufts Medical School, has been appointed lecturer and instructor in the relations of body and mind in the Sargent School of Physical Education at Cambridge, Mass.

At a cabinet meeting held in Paris on October 30, a measure was approved providing for the abolition of the death penalty. This means that the Chamber of Deputies at its coming session will probably enact a law to that effect.

The Italian Congress of Internal Medicine held its sixteenth annual meeting in Rome last month. The following were the questions for discussion: (1) Arteriosclerosis; (2) typhoid affections and Malta fever; (3) arthritism.

The seventieth birthdays of Dr. Wilhelm Waldeyer, professor of anatomy, and Dr. Ernst von Bergmann, professor of surgery, in the University of Berlin, will be celebrated on the evening of December 13 by a Festkommers in the Philharmonic, Berlin.

M. Clemenceau, the French Minister of the Interior, has commissioned Dr. Darier to report upon the arrangements in German universities for instruction in ophthalmology. He has also intrusted Dr. Platon, of Marseilles, with a similar mission concerning instruction in gynecology.

A "STRANGE AND UNKNOWN" disease with rapidly fatal results is announced to have appeared among the cattle of Kern county, California, especially among those feeding near swamps recently under water north of Buena Vista Lake. A bacteriological investigation has not yet been made.

THAT all the patent medicine fiends are not found in this country is shown by figures recently published regarding the sale of nostrums in England. The patent medicine traffic there amounts to nearly forty millions of packages, representing an outlay of nearly three millions of pounds sterling.

IT is reported that the Superior Board of Health of the City of Mexico is studying the problem of drug-store reorganization with a view to protecting the public from a recurrence of the many recent fatal mistakes in dispensing, which have been attributed to the practice of employing incompetent assistants.

THE Massachusetts Board of Health, after finishing its active crusade against unclean dairies, foul ice-cream manufactories, and unfit meat supplies in the various cities and towns of the State, has entered on a study of the bakeries and found 247 "distinctly bad," 235 "not especially bad," 41 "satisfactory," and only 13 "worthy of special commendation."

A CONGRESS OF PRACTICAL HYGIENE is to be held in Paris March 26 to 31, 1907, under the presidency of Prof. R. Blanchard. The work of the congress, which will deal with food, alcoholism, the rearing of children, the workshop, country life, and the colonies, will be distributed among eight sections. The general secretary of the congress is M. Schaer Vezinet.

A COMMITTEE of scientists and educators has been appointed by the Assistant Secretary of Agriculture for the purpose of investigating the practical application of the principles of heredity in relation to the welfare of the human race. The investigation is the outcome of work done in the Minnesota experiment station on the subject of heredity in plant and animal economics.

PLANS have been filed by the New York Department of Charities for a new tuberculosis hospital to be erected in the borough of Richmond on land recently purchased near the present City Farm. The buildings will be eight in number, each four stories high, 80 by 137 feet on the ground plan, and will cost $800,000. The institution will be called the Seaside Hospital.

George Rashid, the Syrian leper, whose wanderings several months ago, when he was driven from West Virginia, then from Maryland, then from Pennsylvania, and finally returned to West Virginia by the Maryland authorities, caused much public attention, died last week of heart failure in the little shanty where he had been imprisoned under guard. His body was cremated by the county authorities.

On October 16, the sixtieth anniversary of the first public administration of ether, Dr. John C. Warren, in addressing the medical men assembled for the purpose of commemorating the first operation under ether, which was performed by Dr. John C. Warren, the grandfather of the speaker, announced his own retirement from the surgical staff of the institution, which he had served for thirty-five years.

It is stated, says an exchange, that the radium mines at Joachimstal, in Austria, recently supplied the Vienna Academy of Science with ten tons of uranium ore, and this has yielded a very large amount of radium, which is to be used for research. The mines are being converted into a radium cure resort. A local laboratory for producing radium salts has been established, and the springs are serving as medicinal baths.

The official status of radium as an import is proving a difficult question for the board of appraisers to determine. The Dingley tariff law makes no specific provision for radium, and importers have objected to the ruling that radium as a chemical salt is subject to a duty of 25 per cent. Application has been made to the board to review this decision, and the matter is being investigated by the general appraiser.

Two Cincinnati surgeons are defendants in a suit for $10,000 damages entered by an individual who was engaged to furnish a certain amount of epidermis to be used in a case that required skin-grafting. The plaintiff alleges that he agreed that a strip of skin one inch by six inches should be taken from his leg, but that while he was under the influence of an anesthetic skin was cut from both legs to the extent of forty-two square inches.

Several cases of typhoid fever have developed at Wesleyan University, Middletown, Conn. An investigation by Professor Conn of the university has shown that the cases were due to contaminated oysters eaten by the students at banquets of the

various fraternities on October 12. It was at Wesleyan University that a similar epidemic a number of years ago, found to be due to the eating of infected oysters, called attention to this mode of transmission of the disease.

Says an exchange: "Bernheim, of Paris, is the president of the Oeuvre de la Tuberculose Humaine. He created a sensation at the recent antituberculosis conference by reading an article describing his examination of a number of patients who are being treated by Krehl with Behring's tulase. Krehl himself was away on a vacation, but Bernheim was given every opportunity to examine the patients, study their clinical charts, etc., and he announced that the tulase treatment had evidently proved completely ineffectual."

The Berlin Academy of Sciences has, says the *Journal of the American Medical Association,* been examining the rich material of ancient medical MSS. in its library, and has just published the first volume of a descriptive catalogue devoted to works dealing with Hippocrates and Galen. The work has been in charge of Profs. H. Diels and G. Schöne. After the complete catalogue is issued it is proposed to publish all the MSS. in full. Professor Heiberg, of Copenhagen, is to help in this task, especially with the Egyptian papyri.

The excessive prevalence of malaria in Greece is said by a contemporary to be checking the development of the country to a serious degree. Out of a population of 2,500,000 there have been 1760 deaths. Last year the number of cases increased to 960,000 and the deaths to 5916. Professor Savas, of the University of Athens, and physician to King George, is initiating a movement to deal with the plague, and has recently been to Liverpool to consult with Dr. Ronald Ross of the School of Tropical Medicine regarding the best means of mosquito extermination.

The Children's Aid Society of Pennsylvania has begun a scientific treatment of vicious and defective children in Philadelphia. The services of alienists, physicians, and surgeons are used. Many children coming under the care of the society have appeared utterly deficient, mentally and morally. After expert examination and treatment, in many instances they have been rendered normal and have become useful members of society. Defects of the eyes, nose, and throat are sometimes the cause of

apparent deficiency. The most careful statistics are taken of each child, whose career is conscientiously guarded in every way while in the care of the society. This system has been carried on for many years with admirable results.

At the jubilee convention of the National Temperance League, held in London recently, the Rev. Wilbur F. Crafts, a well-known reformer, introduced a resolution to petition all civilized countries to extend the scope of the Brussels convention of 1906, with the view to suppressing the trade in opium and intoxicants among uncivilized peoples. The resolution was adopted unanimously. The speaker stated that the only country in which the consumption of liquor was not increasing was the Congo Free State, where there was an international prohibition by seventeen countries.

An employee of the French government postal and telegraph service was stationed at Bastia. He was, says an exchange, in robust health when he arrived there, but he died a year or so ago from tuberculosis. His widow applied for a pension on the ground that the office in which her husband had to work was unsanitary, and that he was compelled to work with a person known to be a consumptive, and that the two employees who had preceded him had likewise died of tuberculosis. Appeal to the highest authorities gained her the pension, and has started a wide-spread movement for putting in good sanitary condition the post and telegraph offices.

In the year 1905, 368 cases of injury through rabid or suspected rabid animals were officially reported in Prussia, according to the *Medical Record*. Of the patients, 71.2 per cent were males and 28.8 per cent were females. The injuries were for the most part caused by dogs, though seven were inflicted by cats, four by cattle, and two by horses. In five cases there was no bite, infection occurring in the course of tending the rabid animal, and in one instance at the autopsy on such an animal. Of the 368 patients, 323, or 87.8 per cent, were treated at the Pasteur Institute in Berlin; of the 45 others, 22 were treated at home and 23 received no treatment whatever. Eleven deaths occurred, three of the patients having received Pasteur injections, and the others having been treated at home or left untreated. That is, the 323 inoculated patients exhibited a mortality of less than 1 per cent, while of the 45 others 17.8 per cent died.

NEW PUBLICATIONS.

MEDICAL STUDENT'S MANUAL OF CHEMISTRY.

In the present edition the section on chemical physics and general chemistry has been entirely rewritten so far as it applies to the former branch of the subject, and has been rearranged and extended with regard to the latter. These extensions have been necessary to permit of proper consideration of the important collateral evidence upon chemical questions which has been supplied by physical investigations, and which now constitutes so important a part of the foundation of chemical principles. The section on organic chemistry has been rearranged in the light of further information upon the relationships of substances and somewhat extended. The section on physiological chemistry has been almost entirely rewritten and enlarged. The author has kept pace with his subject, and the volume as it now stands is undoubtedly the best text-book on chemistry on the market.

The Medical Student's Manual of Chemistry. By R. A. Withaus, A.M., M.D., Professor of Chemistry, Physics, and Toxicology in Cornell University. Sixth Edition. New York: Wm. Wood & Company, 1906.

TEXT-BOOK OF HISTOLOGY.

There has been no change in the general plan and scope of the text-book as outlined in the first edition. Some errors have been corrected, some drawings improved, some new drawings substituted and added. The chapter on the Nervous System, for the elaborateness of which the author is inclined to make some apologies, will prove a most valuable feature of the book. More changes have been made in this chapter than in any other, some necessitated by the advances which have been made in neuro-histology in the past two years, others to further facilitate the teaching of the subject. Several new diagrams have also been added to this chapter. On the whole the work is thoroughly up-to-date and written in such a manner as to make interesting a very dry subject.

A Text-book of Histology. By Frederick R. Bailey, A.M., M.D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons, Medical Department, Columbia University, New York City. Second and Revised Edition. New York: Wm. Wood & Company, 1906.

SYLLABUS OF MATERIA MEDICA.

The exhaustion of the second edition of this little volume has given opportunity to bring it into accord with the Eighth Decennial Revision of the United States Pharmacopœia. The changes adopted by the Commission were so numerous that the volume has been entirely reset. The exactions of the State boards of examiners have made it necessary to include, contrary to the plan of the first edition, all official preparations. On the other hand, practically all unofficial drugs have been excluded. The section formerly headed "Preparations" has been abolished, and a limited number of official preparations, classified chiefly according to dosage, have been placed in the section "Various Groupings."

A Syllabus of Materia Medica. Compiled by Warren Coleman, M.D., Professor of Materia Medica and Clinical Medicine and Therapeutics in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital. Third Edition, Revised to conform to Eighth Decennial Revision of the U. S. Pharmacopœia. New York: Wm. Wood & Company, 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Abscess of the Brain.

Wm. G. Spetler (*Pennsylvania Medical Journal,* October, 1906) says that the diagnosis of cerebral abscess depends chiefly upon the signs of some more or less rapidly developing lesions of the brain, with the discovery of a purulent process somewhere in the body, or of a wound of the head. Abscess of the brain without any evidence of pus elsewhere may be extremely difficult to diagnose. The cerebral signs are much the same as those of tumor of the brain. The choked disk may occur in either condition, but it is more likely to be intense in tumor and to occur earlier; the writer has observed choked disk of high grade in abscess. The temperature and pulse are likely to be subnormal in abscess, but they may be normal or even above normal, especially if the abscess is complicated by meningitis. We should not depend too much on the condition of the pulse and temperature. The temperature is more likely to rise in the terminal stage of abscess, but a rise may occur at any period and be caused by the primary suppurative process, as a superficial wound or purulent pulmonary disease. The stupor, in his experience, is usually greater in advanced stages of abscess than in tumor, and yet an abscess may be latent or nearly latent for a long time, and stupor may be pronounced with brain tumor. It is not uncommon to find slow cerebration preceding stupor in either condition. In many cases the diagnosis must be in doubt, but given a case of long-standing purulent otitis media, and recently developed signs of disease of the temporal lobe or cerebellum, the diagnosis of abscess becomes more positive. High leucocytosis speaks in favor of abscess or purulent meningitis in contrast with tumor. Where the cerebral symptoms appear after a purulent pulmonary process the diagnosis between tumor and abscess of the brain is difficult. Virchow is said to have been the first to call attention to the frequency of abscess following a purulent affection of the lungs. Still more difficult is the determination as to whether purulent meningitis or brain abscess is present, and often the two conditions are associated in the same person.

The diagnosis is important, because less can be hoped for from operation if purulent meningitis develops, whereas operation is demanded if the condition is one of abscess. Lumbar puncture is of great value, as pus in the cerebrospinal fluid obtained by this means points to purulent meningitis; but purulent meningitis may exist although pus in the spinal fluid is not obtained. The presence of mononuclear or polynuclear cells in the cerebrospinal fluid is also of diagnostic value. Kernig's sign is of value as indicating meningitis, but is not pathognomonic and may occur with abscess. Rigidity of the neck is more likely to occur in meningitis, but may occur with abscess. Where abscess is associated with purulent meningitis the prognosis is extremely grave.

Surgical Treatment of Esophageal Diverticula.

Zesas (*British Medical Journal,* Oct. 27, 1906) publishes a collection, which he believes to be complete, of forty-two cases of esophageal diverticulum treated by free exposure and excision of the sac. In eight of these cases the operation had a fatal result. Primary healing of the esophageal wound was attained in only six cases, a fistula having formed in the other surviving patients, which, however, closed after an interval varying in the different records from four days to sixteen weeks. This frequent failure of primary healing is due, as a rule, to the impossibility of keeping the sutured wound at rest. In some few instances the sutures may be torn away in consequence of vomiting or retching due to the anesthetic; but in most cases the disturbance of the esophageal wound is the result of frequent movements of deglutition which, even if oral feeding be withheld, are likely to result from the passage of saliva and pharyngeal secretion. The question of feeding the patient during the after-treatment is, the author points out, a difficult one, especially in those cases in which the strength of the patient was much reduced before the operation. Feeding by the mouth or nostrils is unsatisfactory, as the tube, if used intermittently, is likely to cause spasms of the esophagus, and if allowed to remain will cause more or less irritation. Rectal feeding in exhausted patients will probably be found quite inadequate.

In discussing the merits of preliminary gastrostomy as a measure of supplying sufficient nourishment to the exhausted patient, and of avoiding irritation of the wounded esophagus, the author states that this operation has been performed suc-

cessfully in four cases, but that in one of those it failed to prevent the formation of a cervical fistula. While acknowledging the risk of complicating the surgical treatment of esophageal diverticulum by practicing two operations, he is of the opinion that it will in some cases be found very difficult to dispense with gastrostomy. The chief indication of this operation is, it is held, the necessity of an early and abundant supply of nourishing food. As a means of insuring early and complete healing of the esophageal wound, direct gastric feeding cannot be relied upon. The most promising way of overcoming the difficulty is, it is suggested, a careful attention to the suturing of the divided esophageal coats.

Scientific Anesthesia.

J. T. Gwathmey (*Journal of the American Medical Association,* Oct. 27, 1906) pleads for more scientific methods in the administration of anesthetics, and describes an apparatus devised by him for an accurate percentage method for administering chloroform and oxygen or ether and oxygen in any combination. By the administration of cologne during the first minute, or until the mucous membranes become saturated and the patient is breathing regularly, the element of fear is eliminated and the small percentage of deaths from fright done away with. The patient is just submerged and the reflexes are just abolished, but is within calling distance all the time. The anesthetist must be all the while on the *qui vive* to graduate the anesthetic according to the symptoms. The after-effects are done away with, the buccal glands have not been unduly excited, carbon dioxide poisoning is avoided, as there has been no rebreathing, and the poisonous effects of anesthetics noted by Bevan and Favill need not be dreaded. Gwathmey insists that chloroform should never be given, even by the drop method, at a normal temperature. He gives a table of results of experiments showing that with cats warm chloroform at the temperature of the blood is nearly two and a half times safer than when given at the ordinary temperature, and he accounts for the greater safety of administration of chloroform in the tropics by this fact. The warm chloroform is rapidly absorbed by the blood, and none is left in the residual air to be a menace. It is also, he thinks, more quickly gotten rid of. In any case chloroform at the blood temperature is more respirable, has less after-effects, and is safer than as usually administered. The future anesthetic, he thinks, will be the dose of 1/100

grain scopolamine and 1/6 grain morphine given half an hour before the operation and supplemented by as much of a pulmonary anesthetic as may be necessary; or the local use of cocaine or chloretone may be thus supplemented.

Wounds of the Stomach Treated by Laparotomy.

At the nineteenth congress of the French Surgical Association, held in Paris from October 1 to 6, M. Auvray described three recent cases of wounds of the stomach treated surgically. With these cases added to those which he has already published, the number of patients operated on by him is brought up to seven, among whom there were four recoveries and three deaths. He considers that it is very important to make a large opening in the gastrocolic mesentery for the purpose of exploring the posterior aspect of the stomach so as to ascertain if there is a wound there. Too small an opening makes the exploration very difficult, and he has found that in freely incising the gastrocolic mesentery in the transverse direction several vessels might be divided without risk to the vitality of the intestinal walls. This opening is, however, often insufficient, and M. Auvray has therefore been led to investigate the indications for exploratory gastrotomy. Although this operation is the best means of exploring the posterior aspect of the stomach, it must not be systematically resorted to in all cases, for it increases both the duration and the seriousness of the operation necessitated by the wound. In coming to a decision the principal points to be considered are the nature of the wound, the condition of the stomach as regards fulness or emptiness at the time of the injury, and the circumstances in which the injury was inflicted. Exploratory gastrotomy will probably be of most use in wounds caused by projectiles, and in cases in which the stomach was empty when wounded.

Exposure of the Wounded Heart.

W. Wilms (*British Medical Journal,* Sept. 29, 1906) has, he believes, good grounds for asserting that though the much-modified flap method of exposing a wound of the heart will suffice in the large majority of cases in which the anterior wall of this organ is solely involved, this will prove quite inadequate when the surgeon finds it necessary to expose and suture a wound of the posterior surface. A case is referred to of bullet wound of the left ventricle involving both the posterior and the anterior

walls of this cavity, in which the author, finding it necessary to enlarge the field of his operation, instead of resecting a portion of the sternum made a long intercostal incision, such as was practiced by Mikulicz in his later intrathoracic operations. The author has been led by the successful results of his case to recommend for the exposure of a supposed wound in the heart a long incision in the fourth and fifth intercostal space, instead of a plastic flap made in the thoracic wall. This incision, which can be supplemented, if necessary, by division of the two costal cartilages near the external margin, gives free access to both surfaces of the heart, and can be performed more promptly and with less hemorrhage. Pneumothorax must, of course, follow, but the author points out that this complication cannot be avoided in the "flap" operation.

The Problem of Localization in Relation to Head Injuries.

Wm. W. Graves (*Medical Record,* Sept. 29, 1906) declares that the problem of localization of lesions due to head injuries does not differ essentially from that in other conditions, such as tumor, abscess, apoplexy, and so on, except in those cases in which consciousness is immediately or subsequently so completely and permanently obtunded that the patient cannot be made to react to any kind of stimuli. All patients with head injuries should be subjected to a searching neurological examination before operative interference, in order that focal symptoms may not be overlooked. The writer concludes by saying that a satisfactory solution of the problem of localization in traumatic lesions of the brain will depend upon a consideration of all symptoms and their order of development; the degree of consciousness manifested by the patient and his reactions to stimuli; a degree of involvement of areas of the brain of known function sufficient to cause focal symptoms; the carefulness and thoroughness with which the examination is made.

Illustrated Cases of Prostatic Carcinoma.

J. Bentley Squier (*Medical Record,* Oct. 20, 1906) cites the history of several cases in point and emphasizes the futility of the endeavor to do more than palliate the patient's sufferings by operation when he is the victim of prostatic carcinoma. He declares that the whole question resolves itself into one of early

diagnosis and operation if any lasting results are to be accomplished. The early recognition of carcinoma in any locality is imperative, and nowhere more so than in the prostate. But the problem is a very difficult one. If the disease is at all advanced, the majority of patients live longer if palliative measures are employed than by extensive radical operation. The writer has found that permanent suprapubic drainage gives great comfort to the patient. When the operation is performed, miscroscopical examinations of frozen sections should be made.

MEDICINE.

Angina Pectoris, True and False.

True angina pectoris, according to J. M. Anders (*Journal of the American Medical Association,* Nov. 3, 1906), is a comparatively uncommon condition. Its mechanism is as yet imperfectly known, but two facts are generally accepted: (1) In the vast majority of cases it is accompanied with structural changes in the cardiovascular system; and (2) irritation or disturbance of the cardiac sensory nerves exists. He reviews the theories of its etiology and pathology, and inclines to accept as probable the explanation of MacKenzie that impairment of the muscular contractibility of the heart acts as an exciting cause and elucidates many cases. An impaired nervous vitality must also be looked on as a predisposing cause. "But," he asks, "may there not be added peculiar nutritional or degenerative change in the nervous system brought about by high nerve pressure, which finds its expression in a peculiar neurosis that serves as the predisposing element in angina pectoris?" Angina sine dolore must be accounted for, a condition the main feature of which is an indescribable, almost painless, precordial oppression, that is not uncommonly engrafted on a variety of cardiac structural lesions. It shows that there is a distinction to be made between paroxysmal precordial pains and angina pectoris. The essential difference between true and false angina may yet be found in some at present unknown agency, or possibly in the different impairment of the muscular contractibility, this being slight in the latter and carried to a dangerous extent in the former. False angina is characterized by precordial pain without the angor animi and without gross organic lesions, and it yields to appropriate treatment. Three groups are recognized, namely, the neurotic, the

toxic, and the reflex. The latter class, Anders thinks, deserves consideration by itself, and the fact that certain contributing factors in true angina are present also in this variety renders it of special importance.

The differential diagnosis between true and false angina is discussed, and caution is suggested in making the diagnosis of the latter. Pseudoangina may develop into true angina, and it is safer for the patient to treat it as for the latter in dubious cases. There may be cases of true angina without apparent cardiovascular lesions, and in rare cases there may be an impossibility of their distinction. In spite of this and of the etiologic affinities, Anders agrees with Huchard, Osler, and others in adopting this provisional classification, and separating the functional from the organic forms whenever practicable. True angina is related to the functional forms so far as the vasomotor disturbances are concerned, but it also includes pathologic lesions whose relations to the symptoms are truly obscure and complicated.

The Prevention of Syphilis and Prostitution.

C. G. Cumston (*Journal of the American Medical Association,* Oct. 27, 1906) considers the extinction of syphilis not altogether a chimerical dream, but states that the idea is Utopian in the present state of society. One of the most important means at our disposal, he thinks, is hospitalization, and this should be special for this class of disorders, since the end to be obtained is prophylaxis, and the first condition to fulfil with this end in view, when dealing with venereal disease, is isolation. This should include not only voluntary hospitalization of those who would not willingly transmit their disease, but also obligatory hospitalization of prostitutes. If, he says, we could sterilize prostitution as we sterilize our surgical instruments the gonococcus and the spriochæta pallida to a great extent would be removed from our list of pathogenic organisms. Cumston considers the woman as the most guilty party in the spread of syphilis and venereal disease, as in the male, he says, there is no homologous condition to that of prostitution in the female.

Another excellent measure for the prevention of both venereal disease and prostitution is the proper education of the young of both sexes in sexual matters, and this should be given at the age at which, in each individual case, such instruction becomes necessary for the purpose of moral and physical prophylaxis. Cum-

ston believes that the public should be specially instructed as to the dangers of gonorrhea, from the consequences of which so many innocent women are sufferers. The part played by alcohol in the spread of venereal disease is also noticed. The foci of propagation of venereal disease are not limited to houses of ill fame, among which he enumerates "the comic opera company, the private dining-room, the furnished lodgings, the apartment house on the 'easy virtue' style, the steamboat stateroom, the massage and manicuring parlors, the automobile, the electric baths, the fortune-telling outfits, and lastly, avowed *maisons de joie.*" The down-town office building and the bachelor apartment houses are also included by him in this category. Lastly, Cumston mentions the false position of the law and of public opinion as to this matter, the condonation of sexual criminality in the male, and the comparative education above their class of working girls and the low salaries they receive, as well as the lowered conception of marriage, as factors to be counted in the problem.

Chorea.

From a study and analysis of one hundred and eight cases of chorea treated at Johns Hopkins Hospital and Dispensary, W. S. Thayer (*Journal of the American Medical Association,* Oct. 27, 1906) concludes that there is good reason to think that well-marked febrile symptoms, without rheumatism, occurring in chorea, especially if they are accompanied with undue rapidity or irregularity of the pulse, are at least strongly suggestive evidence of acute endocarditis. It is possible that the fever may be the sign of a deeper-lying infection back of the chorea, but there is nothing in his study to settle the question whether chorea represents a secondary infection or a special localization of an infectious agent responsible for essential manifestations of the disease. The study of the circulatory conditions in old patients still remains to be carried out, but Thayer calls attention to the following points of interest thus far developed in his investigation: (1) Of 689 cases of chorea observed at the Johns Hopkins Hospital and Dispensary during one or more attacks, 25.4 per cent showed evidences of cardiac involvement; such evidence was present in over 50 per cent of the patients studied in the wards of the hospital. (2) Cardiac involvement occurred with somewhat greater frequency in those cases in which there was a history of acute polyarthritis than where such history was absent.

(3) Cardiac involvement was commoner in cases of chorea with frequent recurrences than in those in which there was a history of a single attack. (4) In 110 cases of chorea treated in the wards of the hospital there was fever of a moderate extent in almost every instance. (5) In the large majority of the cases in which high fever was present there was evidence of cardiac involvement. (6) There is good reason to believe that the presence of fever in otherwise uncomplicated chorea is, in a large proportion of cases, associated with a complicating endocarditis.

The Suppression of Tuberculosis.

John Benjamin Nichols (*Medical Record,* Nov. 3, 1906) declares that in a general campaign against any communicable infectious disease two elements are concerned, the invading parasites and the invaded host. Two lines of attack are available, the first to destroy or prevent access of the causative germs, and the second to increase the personal resistance of the menaced individual. As to the first line of treatment, the most radical measure would be compulsory quarantine, isolation, or segregation in colonies of the afflicted individuals. In relation to tuberculosis, this plan is not as yet seriously considered. The maintenance of sanatoriums accomplishes results along the line of quarantine. Proper care and disposal of the sputa should be rigidly and universally practiced and enforced. Another means of preventing access of the bacilli consists in the control of milk and food supply. As to the efficacy of the registration and allied measures, the final criterion must rest on the results of actual trial. Both the health department and practicing physicians have had a part in the reduction of the tuberculosis death-rate. The task of stamping out tuberculosis, however, offers enormous difficulties.

Suppurative Arthritis and Periarthritis in Specific Pseudoparalysis of the New-born.

A. B. Marfan (*Archives of Pediatrics,* October, 1906) says that specific osteochondritis of the new-born (Parrot) may terminate in suppuration. It has been held by most authors that this is due to a mixed infection. The writer endeavors to show that this is not invariably so. A child of six weeks, unable to move its limbs, was brought to him. The loss of function in the upper extremities was characteristic of the specific pseudoparalysis of

Parrot. In the lower extremities there was, in addition, a marked exudate in both knees. By aspiration pus was obtained consisting of polynuclear leucocytes. Microscopical examination and cultivation failed to demonstrate the presence of any bacteria. Under mercurial inunctions the infant made a rapid recovery. In the cases with a mixed infection the pyogenic organisms may be introduced through an existing fistula, or through the circulation in the course of a sepsis. The latter class of cases invariably terminate fatally.

Angina Pectoris: Its Mechanism and Treatment.

Francis Hare (*Medical Record,* Oct. 20, 1906) states that the pain of angina pectoris depends upon vascular distention in the mediastinum. This distention is the result of a more or less localized vasodilatation and of a more or less generalized peripheral vasoconstriction. Two other factors in the mediastinal distention which have to be considered are the work done by the left ventricle and the integrity of the mitral valve. Whatever reduces the work of the left ventricle will reduce the distention, and *vice versa.* The integrity of the mitral valve is essential for the development and maintenance of the mediastinal vascular distention. The writer believes that the ordinary anginal seizure conforms in its mechanism to many other paroxysmal affections, such as migraine and asthma, which may be referred to as "vasomotor neuroses." Inhalation of amyl nitrite is the most prompt and reliable means of relief in most cases. Iodide of potassium in large doses affords in many cases marked relief from the tendency to the recurring paroxysm.

Origin of Pulmonary Tuberculosis.

Schlossman and Stengel (*Deutsche med. Wochenschrift,* No. 27, 1906) by their experiments prove that tubercle bacilli taken into the alimentary canal with the food enter into the system by the same source as the food. The bacilli pass into the mesenteric glands, and from thence into the thoracic duct, the result being an infection of the bronchial glands and lungs. The bacilli pass as readily through the intestinal mucosa and into the mesenteric glands as do the drops of fat, etc., taken up from the food. The writers found tubercle bacilli in the lungs in the guinea-pigs used for experiment a few hours after they had been administered in milk.

Nerve Supply of the Diaphragm.

O. Hess (*Münchener med. Wochenschrift,* No. 36, 1906) in studying the diaphragm reflex calls attention to the different action displayed by the anterior and posterior portions of the diaphragm. He suggests that this can only be explained by assuming a double system of innervation, which is further sustained by the fact that in the embryo the development of these parts of the diaphragm proceeds separately. The anterior portion of the diaphragm is supplied by the intercostal nerves, whilst the posterior portion receives its innervation from the phrenic nerve. The writer on presenting this communication exhibited a patient with congenital impotency of both phrenic nerves; during respiration the anterior portion of the diaphragm worked normally, but the posterior portion remained passive.

Actinomycosis of Abdomen.

Friedrich (*Deutsche med. Wochenschrift,* No. 31, 1906) finds that 4 per cent of the 200 patients operated on at Greifswald during the last three years for typhlitis were suffering from an infection with the actinomyces. Of the eight patients who were treated by the removal of all diseased tissue, the incision extending into the healthy parts, seven are at present in apparent good health. The experience in former cases has been that the condition is liable to recur five to six years after two to three years of apparent cure.

Myiasis Intestinalis.

Wirsing (*Zeitschrift für klin. Medicin,* 1906) reports three cases in which fly larvæ were discharged from the intestine. The patients were two children under five, the other a child nursing at the breast. In the infant there were no disturbances from the maggots, and the flies had in all probability deposited their eggs in the anus as the child was taking an air bath at an open window. The older child had for some time suffered from gastrointestinal trouble, and on treating an exacerbation of this condition with calomel about fifty maggots were expelled.

Reaction for Spermatic Fluid.

Barberio (*Berliner klin. Wochenschrift,* No. 41, 1906) published a year ago that the addition of a saturated aqueous solution of picric acid to spermatic fluid would cause the formation of a deposit of yellowish rhombic crystals. A drop of aqueous solu-

tion of picric acid is added to the suspected fluid on a slide and carefully heated until nearly dry, when another drop is added and heated until a concentrated preparation is made. Levinson has been testing the method, and states that the crystals are not due to spermatozoa, but to the secretions of the prostate or seminal vesicles, as the reaction is positive in cases of azoöspermia.

Biologic Blood Test.

Uhlenhuth (*Deutsche med. Wochenschrift,* No. 31, 1906) finds that dirt, straw, urine, tuberculin, and other substances which are liable to occur mixed with specimens of blood sent in for examination, tend to divert the complement. This possibility of error is apt to render the test inaccurate under ordinary conditions, but does not detract from its value when performed in the laboratory, where contamination can be guarded against.

THERAPEUTICS.

Treatment of Trachoma with Radium.

Dinger (*Berliner klin. Wochenschrift,* No. 40, 1906) has used the bromide of radium in the treatment of sixteen cases of trachoma, seven of which were completely cured, the granulations having entirely disappeared. The younger the patient the more rapid the cure, whilst with older persons and in those with pannus recovery is slower. The radium treatment is painless, and the writer says that in this respect it is far better than caustics and mechanical measures. Five milligrammes of radium bromide was applied for a minute once or twice a week, the applications being gradually lengthened to five minutes. The patients had been under various treatments for two to five years before using radium.

A Plea for a More Rational Therapy in Tuberculosis.

F. M. Pottenger (*Medical Record,* Nov. 10, 1906) says that the original tuberculin of Koch, his later preparations, as well as numerous preparations made by other men, if used properly, will stimulate the cells of the individual suffering from tuberculosis to the formation of defensive bodies, as is shown by the increase of the agglutinating and opsonic power of the blood. There are also certain sera which seem to furnish the antibodies

already formed, which are of some value. The best known of these are the Fisch, Maragliano, and Marmorek sera. One of the chief aims of the physician should be to maintain nutrition at the highest point. The hygienic-dietetic-open-air treatment has for its basis the betterment of nutrition. Open air is not a cure for tuberculosis. Used properly, however, it is one of the greatest aids to nutrition that can be employed. Open air should be supplemented by proper food and carefully regulated rest and exercise to make it most effective. Hydrotherapy is another measure of great value. The cheering and toning effect of sunshine is a very potent factor in aiding nutrition. The giving of raw meat or muscle juice is also indicated. All distressing symptoms and complications should be carefully managed. In relation to this disease the writer urges a broader view and a more rational therapy, which considers the condition in all its varied aspects.

Electricity in the Treatment of Disease.

John V. Shoemaker (*Medical Record,* Nov. 10, 1906) first considers the forms in which electricity is utilized in medical practice. He says that electricity is always the same in itself, but success in its use depends largely upon the personal skill and good judgment of the operator. Electricity may be used to produce local necrosis of an eschar; to disturb the electrical relations of the nerves and muscles; to modify metabolism; to act as a temporary stimulant to nutritive processes, and especially to the nervous system and circulatory apparatus; to accomplish certain local effects by stimulating physiological functions; to destroy parasites upon the surface of the body; to produce electrolysis, to produce intense light, to produce a high degree of heat, and to produce magnetic effects. In general electricity is to be regarded as an adjuvant only to the other treatment.

Intraneural Injection of Cocaine.

S. Vogue (*British Medical Journal,* Sept. 8, 1906) injects cocaine into the trunk of the inferior dental nerve for the extraction of teeth from the lower maxilla. The operation is carried out by means of an ordinary Pravaz syringe, at the level of the buccal sinus, and he has found it completely successful in two-thirds of his cases. Anesthesia has lasted about twenty minutes, and no ill effects have been observed.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The After-care of the Radical Mastoid Operation.

P. Hammond (*Journal of the American Medical Association*, Nov. 17, 1906) reviews the progress in the radical mastoid operation since 1899, and describes the method used by him in the Boston Eye and Ear Infirmary for closing up the cavity that remains. After a thorough bone operation, all bones carefully smoothed down, the Eustachian tube cleared out, and Korner flap turned into the mastoid, the whole cavity is packed with short pieces of iodoform tape and the posterior wound sutured tightly, in most cases closing by primary union. The dressing is left untouched for a week, when the patient is again etherized, and the packing is removed with all clotted blood and hemorrhage stopped. In the meantime the assistant with a very sharp amputating knife cuts a large thin flap from the thigh, and after being spread out without being removed from the place from which it is cut a piece of peau de soie is placed on it. The gauzy tissue with the skin adhering to it is then carefully removed from the thigh. The graft must be just sufficient to cover the entire surface of the exenterated cavity, into which it is inserted on a conical gauze plug in such a way that it comes everywhere in contact with the granulating area. An external dressing is then applied and the head bandaged. This dressing is removed on the third day and no packing whatever is used afterward. There is usually some suppuration from the remnants of the graft for some days, but at the end of two weeks there is often a lining of new skin over the whole cavity. There may be granulation in places not covered with the graft.

If the method fails he thinks it would be due to some error in the following details: (1) The first essential is a perfectly smooth cavity, free from any projecting edges or carious areas. It is asking the impossible to expect any graft to take well on a surface to which it cannot be applied evenly. (2) The next requisite is a large graft and a thin one. No matter how expert the operator he cannot cut a satisfactory graft with a dull knife, and a thick dermis will not only roll so as to bother in the application, but it may not take at all. (3) Careful preparation of

the cavity immediately before the insertion of the graft. There is a tendency toward bleeding on the removal of the packing put in at the time of the original operation. This must be carefully checked and all clots removed before applying the graft. (4) The graft must be kept warm and moist; little time should elapse between its cutting and the placing in position, and extreme care be taken that it touches the cavity in all its parts.

GYNECOLOGY AND OBSTETRICS.

Deaths During Pregnancy—Undetected Cancer of Kidney.

B. Gaultier (*Ann. de Gyn. et d'Obstet.,* August, 1906) reports that a needlewoman, aged thirty-five, in the second month of her third pregnancy, gained admission into a hospital on account of distressing fits of coughing which had lasted for two or three months. The symptoms simulated whooping-cough. The sputum was tenacious and frothy, and was sometimes streaked with blood, and at others contained gelatinous masses of blood pigment. Tuberculous disease of the bronchial glands was diagnosed. The urine was absolutely normal, and Gaultier notes that the patient never said a word about lumbar pains, so frequent in pregnant women. There was no abdominal tumor. The patient died during a violent fit of coughing. The right lung and pleura were infected with cancerous deposit; the tracheobronchial glands were infected, and the largest compressed the right bronchus and pneumogastric. The primary seat of cancer was found to be the right kidney enlarged to the size of a hen's egg; the pelvis and renal vein were invaded. The fetus in this case showed high congestion of the kidney and suprarenal capsule, with numerous hemorrhagic foci.

Action of the X-rays on the Ovary of the Bitch.

M. Bouchard (*Lancet,* Oct. 20, 1906) read a paper on this subject at a recent meeting of the Paris Academy of Medicine. The experiments in question were made by M. Roulier. Last year three observers showed that the *x*-rays in weak doses could bring about atrophy of the ovary in rabbits. M. Roulier repeated these experiments upon both rabbits and bitches, and found that the *x*-rays had an elective action on the ovaries. In very small animals atrophy could be easily brought about without the pro-

duction of any loss of hair. In the bitch, however, it is very difficult to obtain, even though the administration of the *x*-rays was carried to the extent of bringing about lesions of the skin. It would appear impossible to bring about atrophy of the ovary in woman, since experiments upon the corpse of a woman showed that *x*-rays No. 10 were unable to modify the color of a radiometric pastille placed over the ovary.

Postpartum Leucocytosis with Contemporary Splenectomy.

F. Penkert (*British Gynecological Journal,* August, 1906) reports the following case: A primipara, aged thirty-eight, at the beginning of her labor sent a revolver bullet into the left side of her thorax. After perforation and extraction of the dead child her abdomen was opened, and it was found that the ball had wounded the stomach in two places, the spleen in three, and the diaphragm in one; the wounds in the diaphragm and stomach were stitched up and the spleen extirpated. Immediately after the operation the leucocytosis was 34,300, the hemoglobin 40 per cent. During her convalescence, which was uninterrupted, the leucocytes decreased to 7400, and the hemoglobin rose to 65 per cent. Six weeks later the normal proportion (1 to 420) of white to red cells had been reëstablished.

Some Relations Between Diseases of the Rhinopharynx and the Menstrual Function.

At a recent meeting of the Paris Medical Society, M. Royet (*Lancet,* Sept. 22, 1906) said that he considers the relations above mentioned are of two classes. In the first class come those cases in which there is a discharge of blood from the genital organs immediately following upon or very shortly after any operation, however slight, upon the rhinopharyngeal cavity. In the second class come those cases in which dysmenorrhea improves after surgical intervention on the rhinopharynx. Cases falling under the first class are extremely rare and only seem to happen when the rhinopharyngeal trouble is accompanied by vertigo and buzzing in the ears. Cases coming under the second category are much more common, and their practical interest is therefore greater.

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ORIGINAL CONTRIBUTIONS.

NOTES ON PUERPERAL ECLAMPSIA.*

BY B. A. ALLAN, M.D., LOUISVILLE, KENTUCKY.

The subject of puerperal eclampsia is necessarily of imperishable interest, since we may expect to have the disease with us so long as the world lasts. The following cases are presented without comment, other than to briefly outline the methods of management followed, leaving further elaboration of the subject to members of the society. It would be of no practical interest, even did the writer feel justified in thus consuming the valuable time of the society, to cite authorities ancient or modern in regard to the pathology, etiology, etc., since at best little in this connection is positively known.

Case 1.—Mrs. H., primipara, aged thirty-five years, supposed to be at full term. I did not see this patient until summoned at the time of her first convulsion. The seizures were of frequent occurrence; she was tossing and rolling about the bed between convulsions; the extremities were swollen; and she was unable to swallow fluids or medicine.

Upon inspection the external os was found widely dilated, and the membranes intact; the examination seemed to provoke another convulsion. Chloroform was administered, bromide and chloral being given per rectum, and an effort made to induce the patient to swallow a dose of croton oil, but the latter failed. The membranes were ruptured, forceps applied, and within a short time I succeeded in delivering a dead fetus, not apparently a full-term child.

A severe convulsion followed expulsion of the placenta, and

*Presented to the Louisville Medico-Chirurgical Society.

the patient at this time went into a comatose condition, from which she never rallied, dying within three hours.

Case 2.—Mrs. A. L., aged thirty-six years, mother of several children, very large and fleshy, weighing probably two hundred pounds; seen in consultation with Dr. Pelle. This patient had been under observation of the family physician for some time. Uremia was feared and prophylactic measures had been adopted, but to no good purpose. She had the most terrific convulsions I have ever witnessed. The usual remedial measures were employed without beneficial effect.

Rapid dilatation of the os (which was found to be not larger than a silver quarter) was resorted to; as soon as practicable long forceps were applied, and the uterus emptied as rapidly as consistent with safety. Chloroform was administered by inhalation, bromide and chloral by the rectum; croton oil was also given.

The patient sank into a deep coma within a few hours following delivery, and succumbed shortly thereafter.

Case 3.—Mrs. B., primipara, forty years of age, very small stature, had been under my observation almost from the time of her conception. I did not suspect this case as being one of uremia, as the urine had been frequently examined and found to contain no albumin. Delivery was effected with forceps after a somewhat tedious labor, resulting in a torn perineum, which was repaired at the time.

The patient complained of headache after delivery, but her condition seemed in every way normal previous to the accouchement. I remained at the house for an hour, then returned to my office, which was but a few doors distant. After the expiration of half an hour I was hurriedly recalled to her bedside by a message that the family thought she was dying. On arrival I found her in convulsions, and immediately prepared and administered a hypodermic injection of half a grain of morphine and awaited further developments.

The patient did not have another convulsion, slept all day, and made a satisfactory recovery.

Case 4.—Mrs. S., aged thirty-seven years, mother of several children, was seen in consultation with the family physician, who had bled the patient from both arms, and, according to his statement, had taken away about sixteen ounces of blood. A hypodermic injection of morphine was administered, and the patient did not have another convulsion for five hours. In the meantime labor progressed to the extent where forceps could be applied, and delivery was promptly effected.

Immediately upon expulsion of the fetus the patient went into another severe convulsion, and died without regaining consciousness.

Case 5.—Mrs. L., aged thirty-five years, mother of three children, was seen two hours after delivery. The family physician had been in attendance, and when he left the patient was apparently in good condition. As he could not be obtained I was summoned, and found her in convulsions. All efforts to communicate with the family physician having failed, I was requested to assume charge of the case until he could be located. The services of a trained nurse were procured, and the usual remedies were prescribed, such as bromide and chloral, chloroform and croton oil, etc.

This patient had quite a number of convulsions, beginning at six o'clock in the morning and continuing every half-hour until four in the afternoon. When effect of the purgative administered had been realized she regained consciousness, recognized those around her, and made an uninterrupted recovery.

Case 6.—This case was seen in consultation with Dr. Grant, who gave the following history of the conditions observed prior to my visit: The patient was a primipara, aged thirty years, whose urine had contained albumin for several weeks. I saw her about the eighth month of uterogestation, and as the albumin in her urine had continuously increased in quantity, the question of premature labor was considered. While we were still temporizing and hoping that it would not be necessary, the patient was suddenly seized with a violent convulsion, and did not regain consciousness before it was succeeded by a second. After she had been under the influence of chloroform for several hours the uterus was emptied. There were no further convulsions, and the patient gradually regained consciousness by the third day. The albumin practically disappeared from the urine, but the patient failed to recover her strength, developed symptoms pointing to septic infection, and died on the eleventh day.

The treatment in this case was directed to prevention of the convulsions, and consisted of attempts to induce free elimination by means of salines and urotropin. Later chloroform was given to control the convulsions, and after delivery had been effected the treatment was ordinary antiseptic irrigations with stimulants and heart tonics.

I did not see the patient until after development of the septic symptoms. What puzzled us most was the sluggish mental con-

dition, and the gradual progressive failure of strength. The urine became normal, and the degree of sepsis appeared insufficient to produce a fatal outcome.

* * *

In the discussion which followed the reading of the foregoing paper Dr. William Bailey said that his management of puerperal eclampsia was somewhat routine, similar to that described by the author, viz., an endeavor to make the nervous system tolerant to the poison, accomplish free elimination, and empty the uterus so soon as it could be done without much violence. The circumstances being favorable he believed it better to allow a reasonable time to elapse before forcibly producing delivery, particularly if such conditions were present that injury might be done by application of forceps; that anything in the way of violence practiced (if this might be so termed) would be detrimental to a woman in the condition stated. Chloroform should of necessity be given; chloral and bromide in large doses are also indicated; two drachms of chloral ought to be administered in the first dose, and as much bromide as can be absorbed by the rectum; this treatment to be continued until purgation and elimination by the kidneys have been accomplished. Croton oil or some other prompt, active hydragogue ought to be utilized. This, said the speaker, was the course he had usually pursued. He began his obstetrical practice (about forty years previously) by seeing a woman die within two hours of puerperal eclampsia; it was the first case he had ever seen; and he did not know as much perhaps then about this subject as is now known. He saw that woman every day with a general anasarca, and did not realize that the kidneys were involved, nor that uremia, as it is now called, was the condition present. He doubted the propriety of giving morphine until after the uterus had been emptied; he preferred to use it even after purgation and increased urination had been secured; then if the conditions demanded he would not hesitate to administer morphine. Before that period he was doubtful about the propriety of using opiates because they interfered with elimination. If it became necessary to control action of the poison upon the brain, to avoid a death in that way, the administration of opium might be admissible, although there might be some risk in so doing.

Dr. T. H. Baker had observed but three cases of puerperal eclampsia, none of which occurred before delivery had been effected. He had been impressed with two things in the manage-

ment of eclampsia as it had occurred in his practice: (1) The harmlessness and efficiency of morphine in controlling the convulsions. (2) The utter uselessness and inefficiency of croton oil; he had given the latter in doses of fifteen to twenty drops, and if any result had ever been produced by its administration he was unaware of it. He did not hesitate to give half a grain of morphine at a dose if he thought it was demanded, and had never seen any but good results from its use. As Dr. Bailey suggested, it would perhaps be inadvisable to administer morphine before delivery, but thereafter he did not believe it would ever be productive of bad results.

Dr. Louis Frank thought personal experiences were of considerable value, and the expressions of opinion thus far indicated the trend of the profession at large in the treatment of puerperal eclampsia. For instance, one man will advise the use of morphine in preference to other drugs, another does not believe in morphine but gives something else, a third pins his faith to veratrum viride. Personally he did not believe in the use of morphine in puerperal eclampsia until after elimination had been secured. His own experience with morphine had not been favorable. Dr. Allan in his report stated that in one case which recovered morphine was administered. In the treatment of puerperal eclampsia elimination is undoubtedly the first thing to be accomplished, and while the pathology remains obscure it has been amply demonstrated that the convulsions are due to defective elimination of urea.

The management of eclampsia, as outlined in the paper, and as stated by Dr. Bailey, viz., the administration of purgatives, diuretics, etc., until elimination is secured, then the use of morphine or other drug which will have a tendency to control the convulsions, is entirely proper; but he would not use morphine in a case of puerperal convulsions without first inducing free elimination, thus getting rid of much of the poisonous material. Cæsarian section has recently been strongly advocated in the management of puerperal eclampsia, and probably there is something to be hoped for in that direction. The speaker believed that in the future the attendant would likely bleed eclamptic patients, then resort to the injection of saline solution; that it appeared to him this constituted one of the best methods of treatment in this dreaded and oftentimes fatal complication of pregnancy. He had not yet tried the method personally, but if permitted would do so in the next case of puerperal eclampsia that came under his care. It seemed possible in this way to get rid of much of the poison,

replacing the blood withdrawn by saline solution, and at the same time excellent effect would be produced by the saline solution upon the kidneys and bowel, in addition to getting rid of the poison which caused the convulsions.

Little has been written about postpuerperal convulsions, which is a subject that should be more thoroughly studied; even standard text-books are markedly deficient in this respect; in most of them will be found less than half a dozen lines anent postpuerperal eclampsia. If statistics were carefully analyzed many more cases than ordinarily believed would be found to occur after delivery. These cases appear to be looked upon by most authorities as especially favorable, which is certainly untrue, as they are quite as unfavorable as those occurring before labor. It is a question sometimes what should be done when during pregnancy albumin is present in the urine; it requires much discrimination and judgment on the part of the attendant to know what course had best be pursued—*i.e.*, whether to empty the uterus promptly, or attempt by adequate treatment to carry the patient to term. It is to be hoped something new will be developed along these lines, as the pathology of eclampsia is exceedingly obscure and the treatment decidedly unsatisfactory.

Dr. H. H. Grant's idea in the treatment of puerperal eclampsia was that the uterus should be emptied as early as practicable, and while arrangements are being made for this to be done control the patient with sedatives, and if necessary by an anesthetic. It had been his practice to administer an injection by the bowel of chloral and bromide; large doses of chloral (forty grains) can be administered, with as much bromide as the attendant chooses to give, and satisfactory results are often obtained. The question of elimination had been favored in some of the cases under his observation by the administration of five grains of urotropin every two hours either by the mouth or by rectal injection. This assists in keeping the kidneys acting. He thought there could be no question about the propriety of prompt interference with the contents of the uterus, this being the first indication where it is possible, and thereafter if convulsions continue the administration of chloral rather than morphine had been his preference. He recalled two instances in which convulsions did not develop until after the birth of the child. Fortunately both patients recovered under administration of chloral and bromide by the rectum, the use of urotropin per rectum while the patient was unconscious, and afterward elimination by the kidneys was favored by its administration by the mouth.

Dr. H. E. Pelle said the case referred to by the essayist as seen with him in consultation had no preliminary treatment so far as he was aware; he was called to see the patient when the first convulsion occurred, and immediately asked for a sample of her urine, which he was examining when the second call came with the information that the patient was having another convulsion. Dr. Allan was summoned shortly thereafter, and forceps were applied about six hours later. One thing occurred about that time which was mentioned on account of its peculiarity—*i.e.*, the husband of the patient, who was in the room at the time, had a convulsion and fell across the bed; the seizure was as nearly like a "puerperal convulsion" as anything he had ever seen. The man had two such spasms within an hour. His urine was afterward examined, but contained no albumin. He had, however, a diabetes insipidus, passing over a gallon of urine in the twenty-four hours, which still continued. The best eliminative he had found, and one that he believed was unirritating to the kidneys, was benzoate of caffeine, preferably administered by hypodermic injection. He had used this frequently and secured favorable results.

Dr. T. H. Stucky thought the following might be of interest: A young woman (Jewess) was delivered at term, labor normal. During the last two months of pregnancy she had albumin in her urine; she had been given the usual treatment, purgatives, diuretics, etc.; on the second day after confinement he was hurriedly summoned at night. Noting that the condition was one of puerperal eclampsia, he prescribed chloral and bromide, and reaching for his morphine found he had none. The patient was given one-fifth grain of pilocarpine, which produced active diaphoresis. She had another convulsion ten minutes later, but has not had any since. Sweating was profuse and exhaustion pronounced, necessitating the administration of strychnine. He recalled another case in which there were several antepuerperal convulsions, in a primipara nineteen years of age. Chloroform was administered and an effort made to empty the uterus. She was at once given half a grain of morphine sulphate. The urine had been exceedingly scanty, the mother stating that the patient had passed only half a tablespoonful in twenty-four hours, but there was no urine in the bladder at the time. The dose of morphine was repeated in five hours; he also injected three quarts of normal saline solution into the rectum, and was gratified to see that in six hours after administration of the saline the kidneys were greatly stimulated and resumed their function. No other treat-

ment was used. Saline solution may therefore be regarded as one of the best diuretics extant.

Dr. B. C. Frazier had heard recently that the veterinary surgeons used eserine hypodermically as a purgative, and had often wondered if it had been tried in the genus homo, and what results might be expected from such treatment.

Dr. B. A. Allan, in closing, hoped some remedy would soon be discovered with which cases of puerperal eclampsia might be controlled. He had lost nearly every patient with puerperal convulsions under his care within the last few years. It is sometimes difficult to decide the best treatment to be followed in such instances. As indicated in the paper he had not pursued any particular line of treatment. Morphine was used in one case with a favorable outcome, and in another the result was unfavorable.

A PRACTICAL CONSIDERATION OF SEXUAL ASSAULT.

BY C. C. MAPES, COVINGTON, KENTUCKY.

Considering the frequency with which the crime of sexual assault (rape) is perpetrated, if secular accounts thereof may be accepted as even partially true, it seems strange that current medical and medicolegal print contains so little definite and trustworthy information on the subject. Text-books on medical jurisprudence, likewise the statute books of the various States, contain stereotyped chapters relating more or less strictly to the legal status of the matter, but in scientific periodical literature little or nothing can be found. Certainly it cannot be successfully maintained that the final word of interest or importance has been uttered on this theme, as is claimed of certain others of scientific, medical, and legal significance; and in the paucity of reliable literature or current information anent rape (preferably sexual assault) may be found the *raison d'être,* or excuse, if one be needed, for this dissertation.

The question whether or not an adult female can be forcibly induced against her will to submit to sexual intercourse was at one time seriously debatable, but the present consensus of opinion among those who should know is that so long as the woman remains conscious she cannot be compelled by force to acquiesce, no matter how physically strong the male nor how physically weak (within certain limits) the female. In other words, so long as the woman is physically capable of resisting the attack, accom-

plishment of the act is manifestly impossible, since it has been amply demonstrated that the male cannot successfully fight and copulate at one and the same time.

Of course it must be borne in mind that: (1) Through fear of excessive bodily harm the female, though retaining consciousness, may feel impelled to submit to sexual congress rather than incur what appear to her vastly greater impending physical risks; but technically, in the absence of demonstrable resistance, can the act be then classified as sexual assault? (2) She may be rendered partially or wholly incapable of physical resistance by hypnosis or the administration or application of drugs,* in which case accomplishment of the act would be facilitated and the perpetrator thereof would certainly be guilty of sexual assault. (3) The female may be of such tender age that physical resistance is impossible, or through fright, physical weakness, or ignorance as to the nature of the act, may submit herself to the process, in which event the male is doubly guilty, since (*a*) his victim on account of physical inability or otherwise is incapable of resisting, or (*b*) accedes through fright or ignorance of the nature and significance of what is demanded.

Technically the crime of sexual assault may be designated as copulation with a woman against her will, or with one too young to understand or appreciate the significance thereof. According to another writer sexual assault consists in carnal knowledge of a woman forcibly and against her will; that resistance must be to the utmost, else the crime has not been committed in the legal sense of the word; that the proofs, accordingly, apart from the consistency of the woman's testimony, depend mainly upon the presence of signs of defloration, and marks of injury on the man.

Excerpts from the statutes of one or two of our leading States may not be entirely devoid of interest in this connection:

Rape is an act of sexual intercourse with a female not the wife of the perpetrator, committed against her will or without her consent. A person perpetrating such an act, or an act of sexual intercourse with a female not his wife: (1) When the female is under the age of consent; or (2) when through idiocy, imbecility, or any unsoundness of mind, either temporary or permanent, she is incapable of giving consent; or (3) when her resistance is forcibly overcome; or (4) when her resistance is prevented by fear of immediate and great bodily harm, which she

*Chloral hydrate, tobacco, morphine, alcohol, ether, nitrous oxide gas, chloroform, etc.

has reasonable cause to believe will be inflicted upon her; or (5) when her resistance is prevented by stupor or weakness of mind produced by an intoxicating narcotic, or anesthetic agent, administered by, or with the privity of, the defendant; or (6) when she is, at the time, unconscious of the nature of the act, and this is known to the defendant, is punishable by imprisonment for not less than five nor more than twenty years.

A male under the age of fourteen years is *prima facie* incapable of committing rape, nor can he be convicted of assault with intent to commit rape. The word *ravish* is indispensable in charging the crime of rape.

To have carnal knowledge with a woman under circumstances that lead her to believe it is her husband is rape. Illicit intercourse obtained by fraud is not rape, unless it appears that force would have been used if necessary. Sexual intercourse with an intoxicated woman is not rape.

There can be no conviction for a felonious assault upon a woman if she consent to the criminal connection. To warrant conviction there must be evidence of the utmost reluctance and resistance on the part of the prosecutrix. A man may be convicted of an attempt to commit rape upon a young child, since it is presumed to be without consent.

On trial for an assault with intent to commit rape, the testimony of the party assaulted is not indispensable. And on the trial of an indictment for rape the declarations of the female injured, made immediately after the occurrence, are not evidence unless he be first impeached. The fact that she made complaint immediately is evidence, but not particulars of the same. If she conceals the fact for any considerable time, except through fear, it raises a presumption against her. The prosecutrix may be asked whether the act was by her consent or against her will, likewise whether she had had previous connection with other men. Evidence is admissible to show the general immoral character of the prosecutrix, or that she was in the habit of receiving men at her dwelling for the purpose of promiscuous intercourse.

Evidence of unchastity on part of the prosecutrix is admissible if confined to her own neighborhood. Defendant may also show acts of lasciviousness on part of the prosecutrix tending to negative the want of consent. An acquittal on a charge of rape is a bar to subsequent indictment for assault with intent to commit rape.

In order to convict of the crime of rape on a female over the age of consent who was at the time conscious, in the possession

of her mental and physical powers, not overcome by numbers or terrified by threats, nor in such place or position that resistance would have been useless, it must appear that she did resist to the extent of her ability under the circumstances. Any sexual penetration, however slight, is sufficient to complete the crime.

Whoever shall be guilty of the crime of rape upon the body of an infant under twelve years of age shall be punished with death, or with confinement in the penitentiary for life, in the discretion of the jury.

While the presumption of law is that a boy under fourteen is incapable of committing rape this is not conclusive; but the presumption is conclusive as to a child under seven. Between seven and fourteen the presumption is only *prima facie*. Aiders and abettors may be indicted as principal offenders in the second degree, whether they be women or men.

Whoever shall attempt to commit rape upon the body of an infant under twelve years of age shall be confined in the penitentiary not less than five nor more than twenty years.

Whoever shall unlawfully carnally know a female, of and above twelve years of age, against her will or consent, or by force, or while she is insensible, shall be guilty of rape, and punished by confinement in the penitentiary not less than ten nor more than twenty years, or by death, in the discretion of the jury.

To constitute the offense of rape it is not necessary that the act should be committed against the woman's will; it is sufficient that it is committed without her consent.

Whoever shall carnally know a female under the age of twelve years, or an idiot, shall be confined in the penitentiary not less than ten nor more than twenty years.

While medicolegally sexual assault is carnal knowledge of a female forcibly and against her will, Reese suggests that a more comprehensive definition would be carnal knowledge without her conscious permission, or with such permission extorted by physical violence or fraud.

According to Chaddock, rape constitutes an offense in common law, but its definition legally varies in the statutes and codes of various States, particularly with respect to the bearing of the age of consent upon the crime. On the points of will and consent there have been decisions in Arkansas, Florida, Michigan, Nevada, and Wisconsin. Thus rape may be committed when, in *sensu strictiori*, the woman shows no will at all; as when she is narcotized, or in a state of *non compos mentis*. Carnal knowledge may also be rape where it takes place with consent which has

been obtained through fear or fraud, and in later English law absence of consent is interpreted as equivalent to being against the will of the woman.

Sexual assault is possible only in case of physical capacity in the male perpetrator; but impotence is no defense for intent to commit rape where it cannot be shown that the perpetrator was aware of his sexual incapacity. The age of the male in its effect upon capacity to commit rape may be of importance in determining the conditions constituting the crime. A male under the age of fourteen cannot commit rape, according to English law; but in the United States some courts have held that there is no conclusive presumption of sexual incapacity determined by age. The crime may be perpetrated upon the person of any female, no matter what be her age, character, or capacity.

Since the question of consent is of primary importance in its bearing upon the crime, the age of the female as affecting her legal capacity to give consent to sexual intercourse is of the greatest significance.* In common law a child that has not attained the age of ten years is presumed to be incapable of giving consent. Therefore, in general, carnal knowledge of such a child is felony; but many of the statutes make carnal knowledge of a child between ten and twelve a misdemeanor. If under such circumstances the child consents, the offense is a misdemeanor, not an assault.

The so-called age of consent in a majority of the States is fixed at fourteen years. A New York statute makes it rape for a man to have sexual intercourse with a female to whom he is not married provided she be under the age of sixteen years. It is a felony for a man to have carnal knowledge of a child who is under the age of ten in Arkansas, Michigan, Mississippi, North Carolina, and Wisconsin. Intercourse with a child under the age of twelve years is rape under the code of Louisiana. The age of consent is fixed at fifteen years in Nebraska, at thirteen in Iowa, at sixteen in Pennsylvania, at eighteen in Wyoming and Kansas. Legal decisions in Ohio and other States appear less stringent, sexual knowledge of the child having been given more or less mature consideration.†

*The age of consent, says one authority, is an age fixed by statute, and varying in different jurisdictions, at which one is capable or competent to give consent (assent, concurrence, approval, permission, acquiescence). Sexual intercourse with a female child under the age of consent is punishable as rape.

†If the writer be not misinformed later statutes have been enacted in several of the States mentioned raising the age of consent from ten and twelve to sixteen years.

Actual carnal knowledge must be shown by direct or indirect evidence in order to establish the crime of sexual assault, and penetration of the female genitals in the least extent by the male organ constitutes such carnal knowledge. Force, actual or its equivalent, is necessary to the commission of rape; and the force must have been sufficient to accomplish the purpose. Submission obtained by means of fear or terror induced by threats or otherwise, is construed as the result of moral force equivalent to a compelling degree of physical force.

Considered strictly in accordance with the law, sexual intercourse accomplished by means of fraud, where there was no intent to use violence, is not rape. If the female be over the age of consent, where consent is given, it matters not how reluctantly, there can be no rape. The female must have offered all possible resistance, or resistance must have been made impossible by terror or other means. Commonly, sexual intercourse with a woman while she is unconscious, as during sleep or insensibility occasioned by alcohol or other narcotic, is rape; and the same is true in cases of idiocy and imbecility, though in some States this is regarded as merely a crime against the person.

In this connection it may be interesting to note, observes Chaddock, that if the female be under age, and she consents to sexual congress, rape is committed, since the consent does not excuse the act under these circumstances. If, however, the age of consent be nigh (fourteen years), the crime might be subject to mitigation; and furthermore, should the child exhibit premature development, giving her the appearance of being much older than she really is (she being in fact under the age of consent), her having connection with a male ignorant of her real age, under such circumstances, and with her consent or invitation, would render the case similar to one of the age which she appears.

The prosecutrix in an action for alleged sexual assault is a competent witness; but if the defendant deny guilt, her testimony must be corroborated as to material facts, though the fact that rape was committed need not be confirmed by other witnesses.

Sexual assault is far more common on children than on adult females on account of the feebleness of resistance and the innocence (ignorance) of young subjects concerning sexual matters. Tardieu observes that of a total of twenty-two thousand and seventeen cases of rape in France, seventeen thousand six hundred and fifty-seven were on children. The ages of the children, as noted by Casper in one hundred and nine cases, were: Seventy-eight were from two and a half to twelve years old, seventeen

from twelve to fourteen years, seven from fifteen to eighteen years, and seven from nineteen to twenty-five years, or over seventy-five per cent under twelve years.

Considered collectively the physical signs of virginity are possible evidences of the female's preserved chastity, but taken singly absolute proof that she has not indulged in sexual congress is found wanting. Simulation of virginity, for obvious reasons, particularly in adult life, is frequently attempted, and in some instances with most remarkable success. By the employment of astringent douches contractility of the vaginal walls may be accomplished, and restoration of the hymenial membrane may sometimes be effected to a certain degree. Sponges saturated with blood are placed within the vagina in order to simulate the hemorrhage which usually follows first coitus, and the pain incident thereto may be easily feigned.

Among the physical indications of sexual assault to be noted in the adult female may be mentioned swelling and tenderness of the vulva, laceration of the hymen and fourchette, presence of blood upon the genitals and linen of the victim, evidences of a struggle, injuries about the genitals other than the hymen, presence of semen in or about the vagina or on the pubic hair, alteration in the vaginal walls, etc. In children the signs are of longer duration than in adult females; hemorrhage may not be present in children, although the tissues may appear markedly bruised. When only slight traces of a struggle are apparent on the thighs, breasts, etc., it cannot be affirmed that the female utilized all her strength in resisting if she be young and healthy; for a certain class of women, willing enough in point of fact, make a show of resistance before finally yielding; and on the other hand, light pressure on these parts of the female form is sufficient to determine an ecchymosis.

Complete defloration in young girls is a rarity on account of the extreme difficulty of effecting full penetration by the male organ. This is more than likely due to deep situation of the hymenial fold and narrowness of the external vulvar orifice. In nearly all instances of sexual assault, especially on young children, the genital organs will exhibit evidences of injury; particularly will this be true if considerable resistance was made, if violence was used, and if the act was even moderately completed. Thus the vagina and perineum may be bruised and lacerated, and extravasation of blood into the surrounding tissues may occur. In most instances the hymen is uninjured, but may be either totally destroyed or greatly lacerated. In very young children inspection

of the external genitals will often fail to detect the situation of the hymen, as it is not infrequently placed far back in the vaginal tract, and in such instances is not often lacerated by the male organ in attempted sexual assault. In one hundred and eighteen instances of rape on children, Tardieu observed tears of the hymen eleven times in subjects eleven years of age, once in a girl of nine, and once at six years. In fifty-four cases mentioned by Casper, many of them being children under fourteen, the hymen was intact in four-fifths of the number. If more or less complete penetration has been accomplished, there may be observed indications of serious damage, *e.g.,* unusual dilatation and sometimes extensive laceration of the vagina, the fourchette or posterior commissure may be severely injured, and where undue violence has accompanied the act partial destruction of the perineum may ensue. Other signs usually observed in cases of incomplete defloration are pain and tumefaction of the vulva and vagina, difficulty in locomotion, together with exaggerated inflammatory and occasionally suppurative processes such as have occurred or may be expected in adults under similar circumstances. In children under ten or even twelve years marks of violence about the external genitals are comparatively rare because resistance is usually slight, but if over thirteen the utmost resistance to attempted assault would undoubtedly be made, and indications of violence extending even beyond the genitals will most likely be found present.

Of course defloration in any case may be complete or incomplete, depending upon whether intromission has been perfect or imperfect. It is rarely complete in young girls, since full penetration of the male organ is but seldom effected. The question of defloration can be determined only by the presence of external evidences of virginity, of which the hymen furnishes the most positive proof, since this membrane once ruptured from any cause whatsoever is never renewed. However, it must be borne in mind that the value of the hymen as an indication of chastity or of virginity is slight, as neither is its destruction evidence that sexual intercourse has occurred, nor its presence an absolute sign to the contrary; in either case it is but presumptive evidence at best. Sexual congress (with consent) is possible without rupturing the hymen, and instances have been recorded where fruitful coitus has taken place, the hymen being found intact at time of delivery. This anomaly may be attributable to the presence of fibrous or fibroelastic tissue—*i.e.,* an abnormally tough and resisting or exceedingly elastic hymen, unusual size of the natural hymenial

aperture, diminutive size or weak virile power of the male, etc. Destruction of the hymen may be brought about by many causes other than sexual intercourse—*e.g.*, accident, disease, masturbation, medical inspection. Casper records an instance in which the hymen was destroyed by the child's mother, by introduction of the fingers, in order to prepare her for sexual congress with males. The unruptured condition of the hymen, however, in the majority of instances is presumptive if not positive proof of conservation of the female's virginity. In recent complete defloration the hymenial laceration is ordinarily accompanied by considerable hemorrhage, and in hemophilic subjects may be sufficient to cause speedy dissolution.

Adolescent boys not infrequently commit sexual assault on young female children. And the fact is worthy of note that sexual intercourse is not impossible by males of very tender years. It occasionally happens that boys of three to four years of age are capable of having an erection of the penis, and, according to Lombroso *et al.*, the sexual instinct manifests itself peculiarly early in children possessing a hereditary neurotic taint. Koplik cites an instance where venereal disease was contracted by two boys aged five and nine years subsequent to sexual intercourse with a girl of seven, and cases not dissimilar in character have been recorded by other observers. There is no consensus of opinion as to the age at which intromission is possible; thus instances are on record where complete intromission of the adult male organ was successfully accomplished in girls aged ten years and younger, but in the opinion of the writer such cases must be exceedingly rare, and when they are encountered can only be regarded as anomalies or *lusus naturæ*.

Ward (Medical Age) suggests that the frequency of criminal (sexual) assault has markedly increased in Michigan since the age of consent was raised, and if the limit be fixed at eighteen years it is likely the increase will be still further augmented. Like all prohibitory laws, says the author, the tighter the legal enactment the looser the bond; and yet the man who in reality so assaults a woman criminally deserves to be hanged. It is safe to state that Jackson State Prison (Michigan) contains more innocent men convicted of rape (sexual assault) than all other innocents there multiplied together, for the reason that in such cases there are usually but two witnesses to the crime, and the man's evidence counts for nothing as a rule, while the woman's testimony is accepted verbatim without regard to previous standing of either person. Judge Lynch has executed more innocent men for

this crime than for all others combined. The author further undertakes to explain what can be easily proven by a jury of competent physicians, that the crime of sexual assault is physically impossible without consent; that it may be perpetrated through terrorism, but more than criminal assault and attempt (without completion of intent) is impossible without the female's consent, regardless of the relative strength of the parties. Not only innocent men but those who have been actually seduced have "danced at the rope's end" on account of the woman's swearing away the life of the man in order to shield her priceless reputation!

Numerous instances might be cited where a woman, when partially under the influence of an anesthetic, believed she had been sexually assaulted by the physician or dentist from whom she was receiving treatment, and conviction and punishment of innocent men have not infrequently followed under such unfortunate circumstances. It must not be inferred, however, that all the actions filed against professional men (physicians, dentists, lawyers, yea, even ministers of the gospel!) for sexual assault are based upon either pure imagination or wilful fabrication, because this would manifestly be far from the truth; but it can be reasonably claimed that the majority of lawsuits instituted under such circumstances are founded upon false premises, the allegations being actuated by purely ulterior motives.

According to Amos, false accusations are as frequent as twelve to one of true charges. Adult females often accuse innocent men, particularly physicians, surgeons, and dentists, of having assaulted them while unconscious from the effects of an anesthetic or other drug. In such instances the statements ordinarily made are the result of illusions during the woman's period of unconsciousness. The prosecutrix most frequently claims that she was but partially under the influence of the drug administered, and while in such condition had not the strength to offer resistance. Such statements should always be received *cum grano salis* and something more tangible required to reasonably establish the charge of sexual assault. When the allegations are made, as often happens, by a prostitute or other female of shady reputation, this fact alone should be sufficient to reject the evidence as unworthy of consideration. In practically all instances of supposed sexual assault on adult females the truth or falsity of the charge depends upon whether or not consent has been previously given.

While women have undoubtedly been ravished when under the influence of nitrous oxide gas, chloroform, ether, and when

intoxicated, the fact must not be forgotten that emotional females under such conditions might readily imagine they were indulging in sexual congress with their husbands (or others), even with the physician or dentist who might be treating them at the time. Thus Dubois mentions the case of a woman undergoing a surgical operation who attempted to "caress" the attendant while she was under the influence of the anesthetic, and who afterward confessed to having dreamed while unconscious of having sexual intercourse with her husband.

Tidy states that violation of women during sleep is possible only in those habituated to sexual relations, or in the married; it is extremely improbable in virgins, although it might be possible for a man to rape such a person during unnatural somnolence or catalepsy. Some of the courts have decided that it is possible for a man to have sexual intercourse with a woman while asleep, without her knowledge and consent, but this could not be considered rape in an indictment, since no force was used to overcome her will. In other instances, however, judicial decisions have been exactly the reverse—*i.e.*, that to have coitus with a female during her natural sleep constituted sexual assault.

Sexual intercourse is oftentimes practiced by means of wilful fraud, *e.g.*, the man impersonating the husband or accepted lover of the female, thus securing her acquiescence to the act; but this cannot technically be considered sexual assault since force does not figure in the process of inducing consent.

Another not uncommon wilful practice is for physicians, regular and otherwise, to indulge in sexual intercourse with their female patients after convincing them that coitus is essentially an important part of the treatment of some real or imaginary physical malady the relief of which is sought. Medical men have under such circumstances been found guilty, and severe penalties imposed—*e.g.*, an example is recorded where a family physician of good standing in the community was convicted of wilful sexual assault upon a young girl, she having been led to believe that coitus, the real significance of which she possessed but the faintest conception, was a necessary adjunct to the treatment instituted, and that she was receiving vaginal injections of some wonderfully potent remedy! In these days of modern enlightenment, however, the perpetration of this fraud would appear quite improbable, except it be in the case of young and innocent (ignorant) females, or those more than half willing to be thus seduced.

The employment of hypnotism for inhibiting the will and inducing implied consent to sexual intercourse cannot be positively

denied, and not a few such cases have come to light. The perpetrator in the larger percentage of instances is a charlatan, a so-called "therapeutic hypnotizer," and the undoubted value of therapeutic hypnosis has been brought into unmerited disrepute by the criminal operations of such notorious irregulars.

For some of the data herein presented the writer is indebted to the admirable work on Legal Medicine by Dr. Justin Herold, of New York, to whom it is desired full credit be extended.

The tsetse fly (*Glossina palpalis*) is viviparous, and when kept in captivity produces a full-grown larva, one at a time. The larva is of a light yellow tint, and after wriggling about actively for an hour or so turns in a short time into a dark-brown pupa, about the size of a grain of wheat. Members of the sleeping-sickness commission while in Entebbe spent much time in searching for the pupa in various situations, and also offered rewards, but without success. Mr. Minchin records, in a recent issue of *Nature*, that Dr. A. G. Badshawe, already well known for the botanical collections he has sent home, has recently been successful in discovering the pupa in its natural habitat. It was found in a belt of bananas stretching along the shore of the Albert Edward Lake. It occurred in the loose crumbling soil around the roots of the bananas, and was not found in the undergrowth farther inland. Mr. Minchin points out that since bananas are the staple food of the natives, it would be impossible to destroy the plantations without creating a famine. He adds, however, that the fly was found swarming on the deserted island of Kimmi, on the Victoria Nyanza, where there were no plantations, so that the banana cannot be its only breeding-place. Dr. Badshawe has been able to prove that the range of the individual tsetse fly may be at least a mile, a fact which he thinks may be the reason why its breeding-places so long eluded discovery.

The next Congress of French Scientific Societies will be held at Montpellier, April 15 to 21, 1907. The following are the medical questions proposed for discussion: Tuberculosis and the means of diminishing contagion; high altitude and marine sanatoriums; the etiology of general paralysis and tabes; the methods of disinfection against contagious disorders; the water-supply of towns; plague and the possibility of its spread in France; leprosy and pellagra in France; the part played by insects, especially the common fly; the hygiene of the school-child.

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EDITORIAL ARTICLES.

A WORD OF FAREWELL.

With the hearty concurrence of the Editor of the MEDICAL AGE, this periodical is about to be consolidated with the two other well-known publications of Mr. E. G. Swift, *Medicine* and the *Therapeutic Gazette*. Henceforth the three will be merged in one monthly journal possessing a guaranteed circulation of thirty thousand copies. The united publications will bear the name of the "THERAPEUTIC GAZETTE, incorporating MEDICINE and the MEDICAL AGE," and the whole power of their well-organized editorial and business staffs will be exerted in the endeavor to produce the most modern, practical, and helpful magazine at the command of the general practitioner.

The Editor of the AGE does not pretend that he lays aside the editorial pen without a pang. For nine years he has enjoyed the pleasantest relations with the publisher and with the readers of these pages. His task has been a labor of love, else he would long have relinquished a duty which has pressed hard on arduous responsibilities in general practice and in official life. But it is no small satisfaction to know that the influence of the AGE will not cease with its independent existence—that it will last and make for better medicine, better education, higher professional life.

In the conduct of this journal the Editor has enjoyed untrammeled freedom to publish or reject. The publisher has been generous, helpful, responsive to every suggestion, and honorably mindful of the Editor's dignity and prerogative. May the same spirit animate the new enterprise, and may all success reward its merits in its larger field!

EDITORIAL NOTES.

Hyoscine.

On account of the untoward symptoms which have been reported from time to time after the administration of hyoscine (scopolamine), Kessel (*Arch. Intern. de Pharmacodynamie de Therap.*, vol. xvi, p. 1, 1906) has investigated the action of specimens of different physical condition and of varying age upon frogs, rabbits, and dogs. The physiological effect was the same whatever the optical activity of the specimen, as had been previously found by E. Schmidt in 1898. Also a solution over a year old was found to have retained its powers. The drug was tested by observing the dilatation of the pupil, the narcosis, the blood-pressure, and the respiration. The individual reaction of the animal was productive of far greater variations in the results than any peculiarity of the sample of hyoscine used, especially with the more highly-developed creatures such as dogs. In reference to the use of this drug for operations, Kessel points out that though an animal in hyoscine narcosis may fail to notice the prick of a needle, yet the corneal reflex always remained. He quotes Voigt as saying that even when combined with morphine in the proportions of ½ milligramme of hyoscine to 10 milligrammes of morphine, it is only suitable for using as a preliminary to ether anesthesia. The great excitement and convulsions which have been observed occasionally are due to an impurity called "apoatropine," which may be detected as follows: A drop of potassium permanganate solution added to a dilute solution of hyoscine or of atropine suffers no change; but if apoatropine be present, even in the proportion of 1 in 20,000, reduction takes place to oxide of manganese, as is shown by a brown-yellow color.

The Needs and Advantages of an International Congress of Military Surgeons.

From an article on the "Needs and Advantages of an International Congress of Military Surgeons," reprinted from the *Journal of the Association of Military Surgeons of the United States*, by Colonel Nicholas Senn, there would seem to be a desire to create a congress whose main object shall be to "render war more and more humane until the millennium of peace will take possession of the earth." Never were wars more humane than

they are to-day; yet never were they of more frequent occurrence. Truly, their duration is shorter, and fewer people are hurt than was formerly the case, but there is no indication of any diminution of "the narrowing lust of gold" or of "the thousand wars of old." Probably at no previous period have men been so keen on preparing for war as at present; the prospect of diminished suffering on the field is not likely to restrain men from the fray. The line of argument adopted by Colonel Senn seems, therefore, to be faulty; it might have appealed to an audience so long as the spoken words rung in the hearers' ears sentiments of perfervid humanity, but subsequent reflection must have shown that some higher motive will be required to diminish wars than the desire to render them less painful. Colonel Senn acknowledges that "the military section of the International Medical Congress has done much in promoting that part of the healing art which it represents," and also that "among the most important duties which now concern the military surgeons is the one which has for its object to convey the blessings of modern medicine and surgery as practiced in civil life to the soldiers in camp, field, and hospitals." These blessings may surely be better acquired at a conjoint international congress of civil and military surgeons than at one composed only of the latter branch of the profession.

The Treatment of Epistaxis.

One of the most difficult conditions that the practitioner is sometimes called upon to treat is epistaxis. A contributor to a foreign exchange recommends the introduction into the bleeding nasal passage of a tampon soaked with one part of a 1:1000 adrenalin solution and ten parts of salt solution; if this does not control the hemorrhage the passage must be packed with strips of gauze. In most cases this will be sufficient, and it is rarely necessary to place a tampon in the posterior nares. In removing the tampons it is advisable after the first few strips have been taken out to drop into the nostril a small quantity of a solution composed of cocaine hydrochlorate one-fifth, 1:1000 adrenalin solution one, and distilled water ten. The vasoconstriction caused by this application produces enough shrinkage of the nasal mucosa to permit the tampon to be removed without difficulty.

ITEMS AND NOTES.

The Sultan of Turkey is reported to be in a very precarious state of health, and Dr. Bergmann has again been summoned in consultation from Berlin.

Recent despatches from Havana state that there are ten cases of yellow fever in the island, of which seven are in Havana, two in Cruces, and one in Guanabacoa.

The Spanish Minister of the Interior has laid before the Senate a bill for the regulation of the labor of women and children. and for the creation of a national institute of social thrift.

The French Geographical Society has collected the sum of $40,000 for the purpose of organizing a mission to West Africa to study the sleeping sickness in the French Congo. A central laboratory will be established in Brazzeville.

At a meeting of the Yale Corporation in New Haven on November 19, a gift of $50,000 from an anonymous giver was announced to establish the John Slade Ely Professorship in the Medical School in memory of Professor Ely, who died last spring.

During the recent Congress on Leprosy held at Buenos Ayres it was stated that in the province of Cordoba alone there were sixty cases of leprosy, forty-two of which were in the town of Cordoba itself. The theory that the mosquito is a transmitting agent of the disease was also promulgated.

Senator Beveridge has announced his intention of introducing at the coming session of Congress a measure to prohibit child labor. This bill will provide that no railroad, steamship, steamboat, or other carrier of interstate commerce shall transport or accept for transportation the product of any factory or mine that employs children under fourteen years of age.

As the result, it is stated, of the recent visits of French physicians to England, the Parisian authorities are to establish a training school for nurses founded on English models. The new building will be erected near the Salpêtrière, and almost next door to this institution will be built the new hospital of La Pitie. The course is to last three years, of which the first two will be theoretical and the last practical.

The military hospital at the presidio in Monterey, Cal., was recently consumed by fire. Although the building, a large two-story structure, was crowded with patients, some of whom were critically ill, all were removed safely. The fire was caused by the explosion of a gasoline tank at the rear of the building.

The buildings of the famous Dutch University of Groningen were recently destroyed by fire. A fine museum of natural history perished in the flames. The university was founded in 1614, but the buildings just destroyed were erected in 1850. Among them were an anatomy theater and a number of laboratories.

The fifth periodical Congress of Gynecology, Obstetrics, and Pediatrics will be held at Algiers, April 1 to 8, 1907, under the general presidency of Professor Queirel, of Marseilles, who will also preside over the Section of Obstetrics. Dr. Boursier, of Bordeaux, will be president of the Gynecological Section, and Dr. Guinon, of Paris, of that of Pediatrics. The general secretary is Prof. Jules Rouvier, 52 Rue Daguerre, Algiers.

Mr. Jonathan Hutchinson claims, says an exchange, to have found, in the course of a recent trip of investigation through the Rhone valley, additional support of his theory that leprosy originates in districts in which badly cured fish forms an article of food. Cases of the disease occurring in this region were at first thought to be in contravention of this view, but on inquiry into the habits of the peasants it was found that even in the remote regions imported fish of poor quality was used during the winter and spring.

As an outcome of the recent meeting of the German Association of Scientists and Medical Practitioners, it has been decided by the Section of Neurology that a German society of specialists in nervous diseases should be formed. A provisional committee, under the presidency of Professor Oppenheim, of Berlin, has been appointed to draw up a scheme of organization. A German society of urology has been formed with Professor Oberlander as its president. Congresses are to be held every two years in Berlin and Vienna alternately.

The members of the Vermont State Tuberculosis Commission, believing that their work is now well organized, and that it can be best continued under the auspices of the State Board of Health, in their biennial report, soon to be submitted to the legislature, will recommend the abolishment of the commission. They will also recommend that the work of the commission be trans-

ferred to the State Board of Health, and that a bill be passed by the legislature for an annual appropriation of $2000, the sum which the commission has expended annually in its work, to be used by the Health Board for the same purpose.

A BRONZE TABLET measuring three by four feet has been placed in position in the Kings County Hospital in Flatbush, in memory of the late Dr. Walter Reed, who was a former interne of the hospital. The tablet, which is the gift of the Alumni Association of the hospital, bears the following inscription: "Erected by the Association of Ex-Internes of the Kings County Hospital to the memory of Walter Reed, M.D., interne in this hospital, 1871; Major and surgeon, U. S. A.; chairman United States Yellow Fever Commission, 1900-1901. He robbed the pestilence of its terrors and caused the cities of the Southland to sit in peace within their gates."

A SOCIETY has been formed in Madrid, under the title of La Fraternidad Medica, for the purchase and sale of medical and surgical appliances, dressings, disinfectants, books, etc., and for the promotion of institutions having a direct relation to hygiene, medicine, and surgery. The society may also aid in the development of coöperative societies which have as their sole object the promotion of the material interests of the medical profession. The capital of the society is 1,000,000 pesetas (£40,000), divided into shares of 25 pesetas (£1); only members of the medical profession can be shareholders. A part of the profits will be paid into the funds of the Madrid Colegio de Medicos, and another portion will be devoted to the establishment of a provident fund for the benefit of the medical practitioners who hold shares and their families.

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year of the bequest of the late Senor Alvarenga and amounting to about $180, will be made on July 14, 1907, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten and must be received by the Secretary of the college, Dr. Thomas R. Neilson, on or before May 1, 1907. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and

within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award.

The Italian Congress on Tuberculosis was held at Milan in the last week of September. In the opening address Dr. F. Gatti, president of the organizing committee, contrasted the vigorous action taken for the abatement of the tuberculosis scourge in Great Britain and in Germany with the little that was being done in Italy. Resolutions were passed urging the organization of an efficient public service of disinfection, the sanitary control of the milk supply, and the provision of hospital accommodation for the subjects of tuberculosis. In regard to the latter question the feeling of the meeting was that such persons should be treated in separate hospitals with distinct departments for curable and incurable cases respectively. Professor Di Vestea dwelt on the importance of the teaching of the principles of hygiene, with special application to tuberculosis, in all schools. Professor Foa advocated the establishment of prophylactic dispensaries; curative dispensaries he thought did more harm than good, as it was impossible to treat tuberculosis successfully as out-patients. He proposed that the prophylactic dispensaries should be under the direction of the municipal authorities, and a resolution in that sense was adopted by the congress. A committee consisting of Professors Gatti, Bordoni-Uffreduzi, and Zenoni was appointed to submit the resolutions to the mayor of Milan, and to urge upon him the expediency of establishing a prophylactic dispensary in that city without delay.

NEW PUBLICATIONS.

DISEASES OF THE STOMACH.

In this book the subject has been considered from a practical standpoint, and special attention has been paid to diet and treatment. This volume will aid in awakening a deeper interest in the study of diseases of the stomach among American physicians. As a working text-book for the general practitioner, Dr. Einhorn's book will be found invaluable.

Diseases of the Stomach. A Text-book for Practitioners and Students. By Max Einhorn, M.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital; Visiting Physician to the German Hospital. Fourth Revised Edition. New York: Wm. Wood & Company, 1906.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Wounds of the Pancreas.

Borszeky (*Beiträge zur. klin. Chir.*, Bd. 48, Heft 3, 1906), in a paper on injuries of the diaphragm, stomach, and pancreas, discusses the diagnosis and treatment of wounds of the last mentioned organ. Records of wounded pancreas are, it is stated, very scanty. The injury was due in a large proportion of these instances to gunshot wound, and in one case only to stabbing. The diagnosis of a wound of the pancreas cannot be made with any certainty until laparotomy has been performed, and even then is difficult unless in a gunshot injury the track of the missile directs attention to this organ. The concealed position of the pancreas and the relatively slight bleeding associated with the wound render the injury liable to be overlooked. Sharp pain in the epigastrium, and later a sensation of a foreign body in the neck and chemical changes in the urine—such as the presence of sugar and diminished quantity of sulphates—are by no means characteristic symptoms, and it is only by exposure and direct inspection that the presence or absence of a pancreatic wound can as a rule be determined. The prognosis of such injury is very grave, the mortality being almost 70 per cent. This high rate may be attributed, on the one hand, to the digestive action of the pancreatic secretion, and on the other to the situation of a wounded organ, which favors the probability of a complicating injury of the stomach, intestine, or liver, or of one of the large blood-vessels behind the gland. The specific danger of a wound of the pancreas consists in the persistent trickling of pancreatic secretion into the abdominal cavity. Whether such fluid be capable or not of exciting peritonitis has not yet been made out, but there can be no doubt that the exuded fluid may cause maceration of adjacent organs and so favor to a considerable extent the risk of infection. Necrosis may also be set up in the gland, which, when extensive and not restricted to a few small and scattered foci, is invariably fatal.

The surgical treatment of a wound in the pancreas is rendered very difficult by the anatomical position of this gland. It is often found impossible to apply an exact and adequate suture, and then in order to control the bleeding it is necessary to have recourse

to acupressure, which demands great care in its practice in order to avoid wounding the superior mesenteric artery or compressing a branch of this vessel, and thus arresting the supply of blood to a portion of the intestine. The author, recognizing the difficulty of suppressing the discharge of pancreatic secretion even by close suturing of the wound, recommends packing of the seat of operation, so that the discharge may be directed to the surface, and that in case of any subsequent localized necrosis of the pancreas the necrosed patch may be shut out from the peritoneal cavity by adhesions. It is not safe, however, to trust to packing, and no attempt to suture the wound should be made.

Importance of Early Diagnosis and Operation in Cancer.

J. C. Bloodgood (*Journal of the American Medical Association,* Nov. 3, 1906) says that until the etiology of malignant growths is ascertained and a treatment based on this elaborated, the chief problems are (1) early recognition; (2) the method of operating. The public must be educated as to the curability of malignant tumors taken in time, and that their great fatality is due to delay. The responsibility of the general practitioner here is greater than that of the surgeon; the latter has enough to do to fit himself to act rightly when the cases come to him. If the general practitioner does his duty by immediate consultation with the surgeon, the surgeon must be prepared to meet the new requirements of diagnosis, and in this connection Bloodgood lays stress on the importance of his being able to make a naked-eye diagnosis at the time of the operation or of an exploratory incision. As regards the alleged danger of the latter for diagnostic purposes, he thinks it far less than that of delay. The earlier surgical lesions, especially tumors, come to the surgeon for treatment the more frequently will exploratory incision have to be resorted to.

The writer goes over the various types of the malignant growths as regards their relative malignancy, and says that it is of the utmost importance for the general practitioner and the public to be keenly watchful in their attitude to small and apparently innocent warts, nodules, scabs, ulcers, and little areas of induration on the mucous membrane of the lower lip, tongue and mouth, skin of face, in an individual over thirty. Congenital pigmented moles should also be watched for and their immediate excision advised. Other growths mentioned as suspicious

and calling for operation are asymmetrical tumors and nodules in or near the thyroid, single tumors in the breast, and dubious, indurated masses in the stomach wall discovered on exploratory incision. Local pain referred to a bone should always be regarded as suspicious and as calling for an *x*-ray examination. The main point of the article is the importance of the surgeon being able to recognize the nature of the growth and its probable prognosis, and to adapt his operation accordingly.

Appendicitis and Gall-stones.

Attention is called by J. G. Sheldon (*Journal of the American Medical Association,* Nov. 3, 1906) to the apparent relationship existing between appendicitis and gall-stones. From July 15, 1903, to July 1, 1906, he operated on 48 patients with gall-stones, and on seven with appendicitis with cholecystitis without gall-stones. In these seven cases his opinion was that the cholecystitis was secondary to the appendicitis. In two of the gall-stone operations acute infection was present, and the appendix was not examined. One of these patients is well, but the other complains of abdominal symptoms and has tenderness over the appendix. In the remaining 46 gall-stone cases the appendix was normal only in four, and in 34 of the others the history was plainly suggestive (and in some of them definite) of former appendicitis, dating back ten or twelve years.

The writer reviews the evidence pointing to the origin of the infection causing gall-stones, and deduces the probability of chronic appendicitis furnishing the germs through the blood stream. If the liver, through its inefficiency or from the number and virulence of the germs, is unable to dispose of them, and some of them are continually escaping into the bile stream, disease of the bile passages might occur. While this route is not definitely proven it appears theoretically and clinically probable. Hence he concludes that disease of the appendix should be kept in mind in every gall-stone operation. The appendix should be inspected when possible, and should by no means be considered normal on account of the absence of periappendicular changes. Unless Sheldon's experience has been altogether exceptional, he thinks that those who follow the above advice will be impressed with the frequent coincidence of appendicitis and gall-stone disease, and that if the combined operation is done more frequently the results will be more permanent and satisfactory.

Sterile Salt Solution Injections in Intraperitoneal Hemorrhage.

M. Jampolis (*Journal of the American Medical Association,* Nov. 3, 1906) after reference to previous literature on absorption of fluids by the peritoneum, and to Hollenbeck's method of diagnosis, reports results of experiments on dogs, in which after producing artificial intra-abdominal hemorrhage infusion of sterile warm normal salt solution into the peritoneal cavity was practiced. From the results of these and of the control experiments, in which no salt infusion was performed, he concludes:

1. The infusion of normal saline into the peritoneal cavity should be practiced in every case of hemorrhage not accompanied by infection, for two general reasons: (*a*) Its effect on shock; (*b*) its beneficial action on the peritoneum and the conditions in the peritoneal cavity. In some cases its effect would be palliative, in others curative.

2. In cases of intraperitoneal hemorrhage accompanied by such severe shock as to render an immediate laparotomy necessarily fatal, the immediate infusion of warm normal saline solution would certainly do no harm, but would stimulate the peritoneum, counteract existing shock, and prepare the system for any that might follow a subsequent operation.

3. If hemorrhage had ceased and laparotomy was not required, it would be of the utmost value. Besides combating shock, the solution would mingle intimately with the blood, hold the particles in suspension, and hasten absorption and prevent dangerous adhesions.

4. The procedure requires no great skill and can be carried out by any general practitioner. Jampolis advises that the apparatus, consisting of a sterilized Hollenbeck's trocar and rubber tube and a flask of the sterile solution, should be kept for use in emergency cases.

A Case of Intestinal Obstruction in a Child Due to Tuberculous Peritonitis Following Bronchopneumonia.

Henry Hubbard Pelton (*Medical Record,* Oct. 20, 1906) describes this case. The child, less than a year old, had an attack of bronchopneumonia in February. As the signs in the chest and elevated temperature did not entirely disappear, the possibility of tuberculous involvement of the bronchial glands and lungs was considered. The patient was removed to the hospital in the last part of March. The child was in a state of marked

prostration. The abdomen was full, distended, tense, and tympanitic, except in the flanks, where there was shifting dulness. There was general tenderness, more marked on the right side, and moderate general rigidity. Rectal examination was negative. Exploratory laparotomy revealed miliary tubercles about the cecum where adhesions were most abundant. At the cecum a hard mass in the lumen of the gut was felt. This was movable. The mass was pushed on into the transverse colon, and the wound was closed. Death took place about two hours later. Autopsy was not permitted.

Postoperative Gastric Paralysis—Acute Dilatation of the Stomach.

W. A. Bastedo (*Medical Record,* Nov. 10, 1906) has recently seen three cases of acute dilatation of the stomach. One was the postoperative paralytic type; the other two were without paralysis and were due, respectively, to the ingestion of a heavy meal in a chronically dilated stomach, and to the artificial dilatation with gas of a stomach which had an obstructed pylorus. In the first case paralysis of the stomach, pylorus, and probably part of the duodenum had quickly followed an operation for the removal of both tubes and one ovary. There was a large amount of secretion. It was noted that vomiting did not seem to lessen the distention to any great extent, nor did belching bring forth any large quantity of gas. In the second and third cases acute dilatation occurred without paralysis. The writer concludes that acute dilatation of the stomach may be paralytic or non-paralytic, and postoperative abdominal distention may be due to gastric paralysis as well as to intestinal paralysis.

A Benign Tumor Developed on the Interior Surface of the Labium Minor.

Gaignerot (*Journal de Médecine de Bordeaux*) reports this case. The size of the tumor corresponded to that of a mandarin. It was elastic, of unequal consistence, and had on its surface a series of nodosities of woody hardness and of the size of small peas. At the time of its extirpation its color was a pinkish yellow. On section this tumor was seen to consist entirely of small granules like those that covered its surface, hard and yellow. These granules were connected by a gristly tissue, slightly translucent. Microscopically this growth was found to be a fibroma, with lipomatous patches here and there. The tumor was inter-

esting on account of its location. The patient was fifty-four years old, and entered the hospital for the treatment of an umbilical hernia. It was by chance only that the tumor was mentioned. She had noticed a small swelling at the age of seventeen years. This growth had increased in size up to the present time.

MEDICINE.

Tuberculosis in Infants and Children.

According to E. E. Graham (*Journal of the American Medical Association,* Nov. 10, 1906) tuberculosis is common in children over four years of age, and in probably 90 per cent of the cases infection is through the respiratory tract, bacilli entering the lymphatic ducts and being arrested by the glands of the neck, trachea, and larger bronchi. It is important to recollect that tuberculosis of the lymph glands is very characteristic of the disease in early infancy, the disease being sometimes arrested permanently or for a time, in other cases going on to acute inflammation and caseation, much depending on the resisting ability of the child. Tuberculous meningitis may occur, and in the first two years of life the principal seats of the disease are the lungs, bronchial glands, and brain. After the third year the mesenteric glands, peritoneum, and intestines are more likely to be involved than during infancy, but throughout the whole period of childhood the lungs are almost always involved in all moderately advanced cases. The most common type is a double tuberculous bronchopneumonia, more rapid in its course in infants than in older children. The clinical picture often presents many curious features, rendering diagnosis difficult or well-nigh impossible.

Graham describes chronic, subacute, and acute forms, the former running a slow course, and after the eighth year of life closely resembling the adult type. The subacute cases generally last from two to six months, and the lung symptoms may be preceded by a gradual loss of weight for a month or six weeks, the cough being slight and spasmodic. Later the pulmonary symptoms are more noticeable. In the acute cases there are tuberculous deposits and miliary tubercles in the lung, and in addition a simple bronchial pneumonia. The symptoms closely resemble those of ordinary non-tuberculous bronchopneumonia, but their rapid progression and the increasing weakness, and possibly a tuberculous meningitis, carry the child off.

Cases illustrating the difficulty of diagnosis are given. When

bronchopneumonia tends to persist beyond the usual period tuberculosis should be suspected. The situation of pneumonia may assist in the diagnosis. In simple bronchopneumonia the inflammation is apt to be in the lower posterior part of the lung; in the tuberculous form it is more likely to be in the upper portion. Leucocytosis is usually absent in tuberculosis unless there is a mixed infection, and leucopenia is commonly present. If the diseases in which the number of white cells is diminished, such as malaria and typhoid, can be excluded, the diagnosis may be aided by this symptom. Chlorosis may closely simulate tuberculosis, but the finding of the bacilli and history of the case will confirm the diagnosis. Inoculation experiments with glandular substance may decide in chronic cases. The failure of young children to expectorate makes sputum examinations hard to get, but a rubber tube passed down the throat and examination of the mucous scrapings will overcome the difficulty. Lumbar puncture is mentioned as of possible value.

The Dangers of the X-ray.

The dangers from the constitutional effects of the *x*-ray are very well brought out by D. L. Edsall (*Journal of the American Medical Association,* Nov. 3, 1906), and as he says, the lateness of the recognition of these effects is one of the remarkable facts in the medical history of this powerful agent. His study of the subject during the past eighteen months has shown that the rays have effects on metabolism, in some instances most violent, occurring even in normal individuals, and that these are apparently present whenever a general influence is clinically observable. These metabolic changes are due largely, if not entirely, he thinks, to tissue destruction, as shown by a relatively large output of uric acid, purin bases, and phosphate, indicating the excess of nucleoproteid destruction. Histologic studies by Warthin and others show that the organs most affected are the bone-marrow, spleen, and lymphoid tissues. Edsall says that the effects of a single dose may be more severe than those of a similar dose of any other therapeutic agent with which he is acquainted, and may be either very useful clinically or so dangerously violent as to hasten death, or even to cause it where it might otherwise have been avoided. He has known of two deaths from this cause. He thinks we will have to recast our views somewhat; instead of considering the *x*-ray as an agent only secondarily and somewhat distantly harmful, we should recognize in it an agent

as effective as a powerful drug, and one not to be used without good and sufficient reasons and with all needed precautions against its doing any possible harm. The *x*-ray specialist, moreover, should be fully informed as to all possible contraindications, so as to be able to employ reasonable caution in his applications.

Edsall compares the *x*-ray to anesthetics, which no one thinks of recommending without due consideration of their possible dangers in any particular case. He mentions two groups of disorders that seem to him to deserve more careful consideration in this connection than others. One of these is nephritis; the other includes patients suffering from any serious degree of toxemia. A possible third group includes patients with decided anemia, especially if combined with toxemia. He believes that there are decided therapeutic possibilities in the action on metabolism of the *x*-ray, but it must be used with a definite appreciation of its restrictions.

The Physiology of the Circulation.

J. Erlanger (*Journal of the American Medical Association*, Oct. 27, 1906) discusses the facts so far ascertained in regard to the physiology and pathology of blood-pressure and the path of conduction of impulses between the auricles and ventricles of the heart, and discusses the various methods of determining the systolic and diastolic pressures in man. He gives reasons for considering estimations of both as of clinical and physiologic value, and calls attention to the relations of blood-pressure to the phenomenon of Cheyne-Stokes respiration, noticing especially the recent work of Eysler, who has shown that besides the type associated with increased intracranial tension there is also another form associated with arteriosclerosis, myocarditis, and nephritis. The second part of the paper discusses the question of the path of conduction of impulses from the auricles to the ventricles in the mammalian heart.

The discovery of the auriculoventricular bundle of muscular fibers, section of which causes independent action of the auricles and ventricles, is noticed, and the author's method of experimentation on the production of heart block is described. Erlanger also mentions the possibility of the passage of impulses from auricles to ventricles, and says that a definite answer to the question of what is the cause of heart block in man cannot be given in the present state of our knowledge. All we are justified in saying is that disease of the auriculoventricular bundle has been

found in all cases, now four in number, which have come to autopsy, since it has been proved that that bundle forms the only physiologic nexus between the auricles and ventricles of the heart. The article is illustrated, and a rather extensive bibliography is appended.

Acute Intoxication by Mercury.

Barthe and Ch. Mongour (*Journal de Médecine de Bordeaux*) record certain observations which they have made. There are three distinct phases in cases of this kind, the initial period being separated from the terminal by an absolute cessation of symptoms in certain instances. The first period begins soon after the ingestion of poison. It is characterized by bilious vomiting, followed by hemorrhagic fluid. A painful sensation of burning in the retrosternal and epigastric regions is very troublesome. In the hours which follow salivation develops, with lesions of mercurial stomatitis. There is also fetid diarrhea, the dejecta being bloody and stringy. This period lasts from two to five days. As to the condition of the blood, the leucocytes, according to their power of resistance, tolerate a mercurial infiltration for a period more or less long. When the lesions of the digestive tract begin to heal this tolerance still exists, and the patient appears to be entering upon convalescence. But the mercury later disorganizes the white cell, which then allows the poison to diffuse itself throughout the entire organism. The general symptoms of the third period then develop. Although the white cells do not play an exclusive rôle in the defense of the organism, they are the most important factor. This whole subject is of medicolegal interest.

Some Points on the Diagnosis and Treatment of the Pretuberculous State.

Charles F. Disen (*Medical Record*, Sept. 29, 1906) by the term pretuberculous state refers to that special condition of the system which predisposes a person to infection by the tubercle bacillus, or to the breaking down of a preëxisting tuberculous focus which had become latent. As to constitution, he classifies patients in two groups, the acid and the alkaline. He believes that the alkaline type is far less immune than the acid one to tuberculosis. He tests both urine and blood to determine the type with which he is dealing. He describes his methods in detail. He states that the alkaline type is partly concealed and ren-

dered manifest only by the low staining qualities of the nuclei, the softened protoplasm of the leucocytes, and frequently by soft and unduly translucent finger-nails. If, too, there is muscular debility, some loss of weight, and increasing laxity of the tissues, suspicion of the pretuberculous state may be considered confirmed. Fresh air, phosphoric acid, hypophosphite of calcium, nearly raw, juicy beefsteak, and raw eggs are indicated in the treatment of this condition.

Choice of Cow's Milk.

J. Allen Gilbert (*Medical Record,* Oct. 27, 1906) states that when commercial value is the only point at issue a milk must have a high percentage of solids in order to be "good." This is not true, however, when weak digestion is to be dealt with. Skim milk contains nearly all the protein of the whole milk. But after the fat in the cream has been removed the milk loses half its fuel value. What is left, however, has a value equal to that of the whole milk for the building and repair of tissue, for the making of blood and muscle and bone, while it has half the value of the whole milk for supplying heat and muscular power. Buttermilk is practically sour skim milk. Other things being equal, the milk of a cow which gives a large quantity is preferable to that of a cow giving a small quantity. The former is sure to have a rugged constitution, good digestive power, depth of respiration, and good physiological traits. A phlegmatic temperment in the animal is desirable. The writer concludes his paper with a discussion of the relative merits of various dairy breeds.

The X-ray in the Study of Congenital Malformations.

Joseph William Pryor (*Medical Record,* Nov. 3, 1906) declares that it would be difficult to estimate the value of the *x*-ray as a means of diagnosis. This method is particularly useful in the case of bone injuries; and in congenital malformations it is the only positive means of making an exact anatomical diagnosis. By means of the *x*-ray the writer has examined two cases of polydactylism. In the second case one would think from microscopical examination and from palpation that there was an extra thumb on each hand, and that the external digit was the supernumerary one. Examination, however, by the *x*-ray showed that the inner thumb was the one to be sacrificed. The writer then discusses these cases from a biological standpoint.

Ptomaine Poisoning from Canned Beans.

Rolly (*Münchener med. Wochenschrift,* No. 37) cites a case in which a number of men in a warehouse had partaken of canned green beans for dinner. In about twenty hours they started to come to the hospital with severe enteritis, chills, nausea, vomiting, headache, vertigo, and diarrhea. These symptoms were noticed in some cases within four hours of eating the beans. This condition lasted three to four days, and all of the 250 persons affected slowly recovered. The beans had been heated, but not to the boiling point. An examination of the beans showed the presence of the colon and paratyphoid bacillus, and the trouble was due more to their toxins than the presence of the bacilli themselves.

Persistence of Immunization After Diphtheria.

Sittler (*Jahrbuch f. Kinderheilkunde,* No. 2) notes that the immunity conferred by injection of antitoxin persists for three to five weeks if the patient is not kept in contact with those suffering from the disease or convalescents. When they are kept in constant association the immunity cannot be relied on for over ten to fourteen days. Even in immunized children catarrhal conditions act as predisposing factors to diphtheria. The fact of having had the disease plus injections of antitoxin does not confer a greater amount of immunity than antitoxin alone.

DERMATOLOGY, SYPHILIS, AND RAY THERAPY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Member of the American Dermatological Association and of the American Roentgen Ray Society.

Psoriasis.

The following are substantially the conclusions emphasized in an article by L. D. Bulkley (*Journal of the American Medical Association,* Nov. 17, 1906), based on a study of over five hundred cases, which are tabulated according to age, duration of disease, time of its appearance, heredity, etc. Psoriasis is not a purely local disease, but has important constitutional relations. It is not a parasitic disease, in the proper sense of the term; it has no definite microörganism and is not contagious. The immediate skin lesions are probably due to the ordinary microörganisms of the skin becoming pathologic under favoring conditions. It cannot be cured by local treatment, and though this may re-

move the lesions they are likely to return. When local treatment appears to cure permanently, the eruption may have been dermatitis seborrheica, which in some phases closely resembles psoriasis. Heredity is a relatively unimportant factor, not present in more than one-fourth of the cases, and capricious in these. Psoriasis is not a late manifestation of syphilis. It has no one tangible internal cause, but faulty metabolic changes are probably at the bottom of every case, and these may be induced in many ways.

The repeated and thorough volumetric analysis of the urine is of great value in guiding the treatment in different cases and at different times. There is no one remedy of universal value in psoriasis, though arsenic is the most generally useful. It can be taken for a long time without harm, if properly given, but it usually is best with other remedies or alternating with them. In acutely developing psoriasis it often acts badly, increasing the eruption. In many cases the proper use of alkalies is of the greatest value. The avoidance of meat or an absolutely vegetable diet is often of great value in treatment, and is sometimes attended with freedom from the eruption. Alcohol must also be avoided. The disorder is an exceedingly rebellious one, and prolonged internal treatment—at least two years—is needed. While local treatment is of the greatest value, its temporary success should cause no let-up in the general treatment, which sometimes alone relieves the local symptoms. The *x*-ray is a valuable adjunct to local therapeusis, and is sometimes capable of removing chronic lesions by a single application.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Headache from Aural Disease.

P. Hammond (*Journal of the American Medical Association*, Nov. 10, 1906) says that headache from aural derangement is more likely to be misunderstood as to its cause than that from ocular trouble, notwithstanding its possible severity, because it is not so directly associated with conscious functional defect of the special sense, especially the chronic forms of aural headache. Yet it is fairly common, the more so because of the intimate relations of the innervation of the ear and the central nervous system. In young children, as Gradle has shown, a continuous headache

is likely to occur from slight obstruction of the Eustachian tubes, which is at once temporarily relieved by inflation of the middle ear. For permanent relief, steps should be taken to remove any adenoids or other causes of obstruction of the Eustachian tubes. In the more chronic adhesive processes in the internal ear, absolute pain is seldom felt, but there may be a feeling of fulness or of pressure in the brain. When headache is due to acute middle-ear inflammation it is usually relieved by paracentesis. Politzer thinks that some of the most severe cases are due to hyperemia transmitted to the scalp. Severe pain with aural disease, not confined to the region of the ear and resistant to treatment, suggests intracranial trouble.

The most enduring types of headache are seen in old cases of chronic suppuration, in which masses of indurated products form in the cavities of the middle ear and mastoid. The pain is usually dull and heavy, but is subject to exacerbations which may be brought on by the use of injections, especially of hydrogen peroxide, which swell up the masses and cause pressure. Caries also, especially with granulations, may be the cause of headache in these cases. The diagnosis can often be made by the discharge, but if the suppuration is slight or absent the most careful examination may be required. It is very common for an ear that has formerly suppurated to remain apparently dry for many years. Treatment should aim at removal of all diseased tissue. Sometimes this can be accomplished by introducing astringent and antiseptic solutions into the ear, but if bone caries is present, it must be thoroughly removed. In advanced cases the radical mastoid operation may be necessary. In any event cessation of the discharge will probably relieve the headache.

Headache and Eye-strain.

G. M. Gould (*Journal of the American Medical Association,* Nov. 10, 1906) claims that a vast majority of all cases of headache, certainly nine-tenths, are due to eye-strain beyond question, and that with or without this headache a large, indefinite proportion of digestive, nervous, and psychic disease is due to the same cause. He accuses the ophthalmologists of being in a state of narcotism on this subject, and text-book writers and medical instructors are, he thinks, almost criminally indifferent to the matter. The general practitioner in the country, and also in the cities to some extent, is far more alive to the truth than are the

specialists. He says it is of course beneath the dignity of most neurologists to care about the cure or cause of any disease. He believes that the explanation of all this is the lack of skilled refraction work. Until we establish a serious and scientific refraction school the evil will continue, and where there are a few skilful and careful refractionists in the country who would agree in their diagnosis in one case, there are 5000 who would disagree, root and branch. There are, he says, at least 15,000,000 American children and adults afflicted with lateral curvature of the spine, and this he attributes largely to unrecognized ocular defects. To this he mostly ascribes the growth and success of osteopathy, Eddyism, and other quackeries. The hope of progressive and helpful medicine, he claims, lies in the general and country practitioners, and until they secure the establishment of at least one serious refraction school with a two- or three-year obligatory course of postgraduate study the ophthalmologists will not agree.

Remarks on Enucleation; Some Uncalled-for Disfiguring Operations Resulting from Failure to Recognize Accessory Sinus Disease.

Henry Manning Fish (*Medical Record*, Nov. 3, 1906) declares that were the ophthalmologist to regard a retro-ocular edema, the involvement of an external muscle, a sluggish pupil, and an idiopathic inflammatory condition about the orbit or within the globe as a symptom of disease of the accessory sinuses, unfortunate enucleations might be avoided, and in many instances the function of the eye be preserved. The writer then cites the history of several cases in which failure to recognize accessory sinus disease resulted in the unnecessary disfiguring operation of enucleation.

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PNEUMONIA.—"The pneumonia season is rapidly approaching. Soon the various journals will be full of the statistics of past years in regard to the prevalence and fatality of this disease. The pathology and etiology will be thoroughly gone over, but, judging by the past, most writers will have very little that is encouraging to say as regards treatment.

"Several points, nevertheless, must be kept in mind. Whatever drugs are used internally (and this depends very much upon the individual case), the patient must have plenty of fresh air. Do not be afraid of his taking cold on account of the cold air blowing across his face. It is now considered that this is impossible. Also, whatever drugs may be used, keep the body warm with suitable clothing, and use externally some preparation which will cause a comparative lessening of blood-pressure in the lungs. Cold applications, besides lowering the vitality of the patient, cause a depletion of the superficial vessels and consequently increase the hyperemia in the lungs themselves. Our attention then would be drawn, *per contra,* to hot applications. To the most of these there are very great practical objections, such as their inconvenience, their tendency to grow cold very rapidly, and the fact that they must frequently be renewed, thereby disturbing the patient's rest, to his manifest detriment.

"We have found but one form of hot application which seems to us to entirely fill the bill, and that is Antiphlogistine. By its means the vitality of the body is conserved, the blood is attracted to the surface and away from the lungs (its hygroscopic action remarkably enhancing this effect), and the tone of the heart's action is maintained. Besides this, its frequent renewal is not necessary, and the patient's rest is not thereby disturbed. Practically we know that by its use the patient is made much more comfortable, the fatality is much decreased, and if abortion of the disease is possible, we believe it can be accomplished better by this means than by any other."—*Kansas City Medical Record,* October, 1905.

DR. E. JAY FISK, Troy, N. Y., uses Eusoma in the treatment of all forms of irritation of the throat, and states that even in follicular tonsillitis he has been surprised, as well as pleased, with the prompt and satisfactory results which he has obtained from its use. Dr. Fisk prescribes Eusoma as a local application in these cases, and almost without exception immediate relief from unpleasant symptoms is obtained. Dr. Fisk also states that he gives Eusoma internally in irritative diseases of the skin, supplementing its internal use by the external application of the same remedy.

Dr. Fisk's experience is confirmatory of that of other physicians who have studied the clinical use of echinacea. Dr. A. B. Matthews, of Elberton, Ga., in an article published in the *Georgia Practitioner,* May 15, 1905, states that "it promotes the flow of saliva with feeling of well-being in the stomach, and is slightly diaphoretic, increasingly if continued. The action of the kidneys and whole glandular system seems to be stimulated under its influence. The stomach is improved in its function, the appetite increases, food is more perfectly digested, the bowels operate better, and absorption and assimilation and general nutrition are in every way improved. It encourages

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may be amusing, but the **Best System** for the doctor is the one which his patients cannot misunderstand, even if they wish to.

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secretions and excretions and in this manner prevents any further autoinfection, and quickly relieves the system of any that is present."

Eusoma is simply echinacea combined with the adjuvants, thuja and baptisia, and is without doubt the most reliable preparation of echinacea upon the market. Each fluidrachm of Eusoma contains 15 grains of echinacea, 2 grains of thuja, and 4 grains of baptisia.

The Eusoma Pharmaceutical Co., of Cincinnati, have collected a large amount of information with regard to echinacea, which they will be glad to mail to any physician requesting it.

Brief Clinical Reports on Impoverished Blood.—Probably the most frequent and important condition which the average physician is called upon to treat is an impoverished blood-supply. Blood impoverishment is a condition rather than a disease, and may be met with in all walks of life and at any age. It is symptomatic, as many diseases and cases are observed where it seems to be the chief clinical symptom, where no well defined organic disease can be observed, but where many indefinite complaints due to blood impoverishment are plainly in evidence. Whatever concomitant conditions exist with anemia, and regardless of whatever special treatment may be demanded by plainly existing established organic trouble, it is, nevertheless, a fact that the most complete and rapid cures are by restoring to the blood its normal elements. Consequently the physician is justified in treating all cases of anemia with regard to the anemia itself, but at the same time not overlooking the care of the other pathological conditions which may exist.

A large hospital experience has given me ample opportunity to study these blood conditions and compare the action of the many therapeutic agents employed in the treatment of blood impoverishment. My efforts have been constantly directed toward finding the remedy which will have the most complete and rapid results in restoring the red blood-corpuscles, thereby affording

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We have collected a large amount of information about Echinacea which we would like to place at your disposal. Shall we send you this descriptive matter? Yes, it advertises Eusoma, which is simply a perfected form of Echinacea—nothing secret about it—a doctor's remedy, manufactured by a doctor.

The Eusoma Pharmaceutical Co.,
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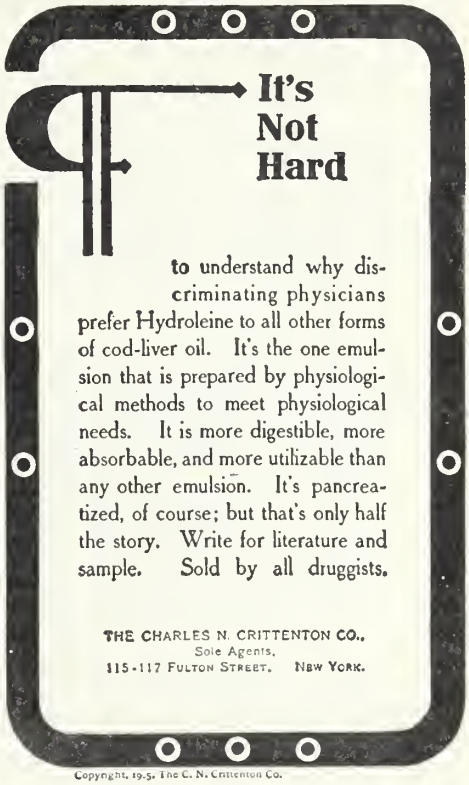
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the surest and quickest relief from the weakness and general debility which always accompany blood impoverishment.

In the beginning of my experiments I noted that those therapeutic elements containing a food product and a stimulating vehicle have shown the most satisfactory and prompt results, while those purely of a drug basis seemed to have a limited usefulness. The conclusion reached by my experiments, extending over several years, leads me to unhesitatingly indorse Bovinine as being the best tonic, stimulant, and food.—Dr. John Griggs, Farmington, Conn.

Sample Bottle Alone of Merz Santal Compound Capsules All But Cured a Chronic Case.—

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Gentlemen—I used the sample of Merz Santal Comp. in a case of chronic urethritis and cystitis with excellent results. My patient told me it almost effected a cure. I had him on sandalwood oil previously, which seemingly did him no good. He is comfortable now, with no unpleasant symptoms on urination. I think it should be carried in stock by all druggists, and prescribed in all such cases by physicians.

Respectfully,
Dr. J. T. Mullins.

Ontario, Canada, Feb. 3, 1902.

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Dear Sir—After wearing for over four months the arm made for me October, 1901, for amputation six inches below the elbow, I can cheerfully state that it is fully up to my expectations. My stump is much harder since wearing it. The arm fits perfectly. I can do many things with its aid which otherwise I would not be able to accomplish.

Respectfully,
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It is a Specific for Pruritus Ani or Pruritus Vulvae.—Resinol Ointment has a wider range of usefulness than

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Methods employed render these addictions the most certainly and readily curable of all the chronic ailments. For particulars address the Retreat most convenient to you.

any other external application I have ever known. Two recent cases of erysipelas were greatly abbreviated by its use. As a dressing to any local inflammation, such as burns, boils, mammary abscesses, etc., it is so far superior to anything else that I now find it indispensable in my practice.—A. H. KEMPTON, M.D., Newport, N. H.

ANTIDIPSOLE, as its name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. PETER-NEAT-RICHARDSON CO., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

HEROMAL.—The popularity of heroin as a remedy for the relief of coughs, pains, and difficulty of breathing in respiratory affections has led to the introduction of numerous preparations in which it is the active ingredient. Heromal represents a new departure in this class of remedies, since it combines the beneficial action of heroin with the tonic nutrient and reconstructive properties of a pure and agreeable malt extract.

Although the value of malt preparations in conditions of vital exhaustion, and especially in chronic pulmonary diseases, is generally recognized, there is still much difference of opinion concerning their exact mode of action. The conflicting statements of various authors are dependent to a great extent upon the fact that malt is a complex body, and that the extracts derived from it differ greatly according to the purity of the materials used and the method of manufacture. From a medical point of view the essential constituents of a good malt extract are a high percentage of diastase and maltose. In its ability to convert starch into dextrin and sugar, malt diastase closely resembles the ptyalin of the saliva and the diastasic ferment of the pancreatic juice. The greater the proportion of diastase in a malt extract the greater will be its digestive power. Maltose is an easily assimilated form of sugar, and has a high nutritive value.

In diseases attended with malnutrition, and particularly in pulmonary tuberculosis, a good malt preparation not only promotes the digestive functions by supplementing the action of the pancreatic juice, but also supplies in itself a not inconsiderable amount of nutritive material to the impoverished organism. The phosphates contained in malt are also of value as

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The malt extract which forms the basis of Heromal will convert over seven and a half times its weight of arrowroot starch into products not reacting with iodine. It is a clear, liquid extract, having an agreeable taste, and unlike the thick, heavy malt preparations does not cloy the palate, but is well tolerated even in cases of marked disturbances of the stomach.

In combining heroin within this extract the utmost care has been taken to secure a uniform and perfect solution of the drug, each dessertspoonful representing one-forty-eighth grain, which is a sufficient dose for continued administration.

With regard to its therapeutic indications, Heromal is of distinct service in that large class of phthisical patients who are harassed by a constant irritating cough, which is not only very exhausting, but often disturbs sleep. Heromal in these cases allays the cough and also improves the breathing on account of its stimulating effect upon the respiratory center. The respirations are thereby rendered more effective—that is, a greater volume of oxygen is taken up into the lungs with less effort. For the same reason expectoration is facilitated, and there is less tendency for secretions to accumulate in the bronchi.

Equally important is the influence of Heromal in regulating the digestion through its diastase, enabling the patient to assimilate more food, and also in furnishing to the body the valuable nutritive material contained in malt supplemented by the hypophosphites.

Aside from its use in tuberculosis Heromal will be found of benefit in other chronic diseases of the air-passages, such as chronic bronchitis, emphysema, and fibroid changes in the lungs. While in most of these conditions a permanent cure is rarely attainable, Heromal will aid materially in promoting the comfort of the patient.

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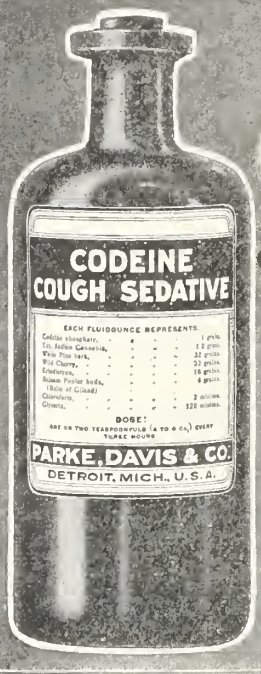

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Codeine Phosphate, -	1 gr.	Eriodictyon, -	16 grs.
Ext. Indian Cannabis,	1-2 gr.	Balsam Poplar Buds,	4 grs.
White Pine Bark, -	32 grs.	Chloroform, - -	2 mins.
Wild Cherry, - -	32 grs.	Glycerin, - -	120 mins.

Codeine Cough Sedative allays cough, stimulates bronchial secretion and assists the respiratory apparatus in the elimination of the products of inflammation. It is worthy of trial in obstinate cases that have resisted other medication.

Supplied in pint and 5-pint bottles.

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THE treatment of rheumatism to a certain extent has been, and is, empirical. It has been said "that rheumatism is due to lactic acid," etc., and we believe that fact, because in those cases where there is an abnormal amount of lactic acid, you will find rheumatism, and when the system is normal, as regards lactic acid, rheumatism is absent. It has never been definitely explained in just what manner the lactic acid produces the rheumatic diathesis, which is usually located by exposure. Therefore the remedies we have at hand, have been discovered entirely by clinical experimentation. Thus we know that salicylic acid and potassium iodide are among the best anti-rheumatics. Elixir Salicylic Comp. (Wm. R. Warner) has given universal satisfaction in all cases where there is a rheumatic taint. It is especially valuable in the rheumatic diathesis and in the treatment of acute inflammatory, subacute, and chronic rheumatism, any of which will yield to tablespoonful doses, every three or four hours, until four doses are taken; then a dessertspoonful at a time, and finally decreased to a teaspoonful every three or four hours.

In acute inflammatory rheumatism, experience has proven that two tablespoonfuls administered every four hours, until a slight ringing in the ears follow, the dose then decreased to a tablespoonful every three or four hours, will produce the desired effects.

In the manufacture of Elixir Salicylic Comp., the most difficult problem was to overcome the bad effects of salicylic acid and yet preserve its therapeutic value. This has been accomplished; in fact a new chemical compound is the result, and not merely a mixture. Long clinical experience has proven that its effects are much more certain than either one of its component parts, when prescribed alone, or in simple combination.

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The reward of your labor and patience will be the gratification of thousands—the Forms are bound to meet with immense favor.

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SAL HEPATICA VS. NATURAL MINERAL WATERS.—The superiority of Sal Hepatica over the natural mineral waters that are specially recommended in the uric acid diathesis and the various forms of constipation is clearly shown by the following facts: By commingling lithium and sodium phosphates in proper proportions with certain of the "Bitter Water" salts, as represented by Sal Hepatica, a compound is secured that is superlatively more active than either the

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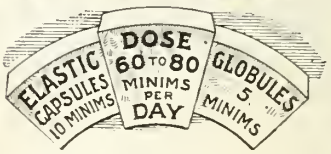

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lithium or sodium salt alone, or, indeed, than any natural mineral water or any combination that can be effected. Recognizing this, the most eminent practitioners latterly have taken to prescribing Sal Hepatica in preference to the natural mineral waters, with the result that the remedial action of the latter is enhanced, the untoward manifestations accruing reduced to a minimum, and their palatability materially increased.

Sal Hepatica is very effective in limiting and reducing the amount of uric acid formed within the circulation and excreted by the kidneys, and is very freely absorbed and taken into the blood and as rapidly (along with the chemical products formed) eliminated by the excretory ducts or organs, as is readily demonstrated by its presence, after a brief course thereof, in perspiration and urine, the latter more particularly being doubled or trebled as to quantity and rendered decidedly alkaline.

THE "Western" Silver-plated Metal Springs for holding bottles are the best features of the Western Leather Manufacturing Co.'s cases. Silver-plated and lacquered to prevent corrosion. Cut from a continuous plate of spring brass, the base of the spring being a part of the plate. No rivet hole to weaken the spring; no rivet head to break the bottle; no verdigris to poison the blood. It is impossible for them to become loose, like single springs, because they are a part of the entire plate.

The distinctive features of their springs are that they are cut from a continuous plate of fine quality of spring brass, the base of the spring being a part of the plate, and arranged diagonally, to bring the bottles next to each other. They are silver-plated and lacquered to prevent corrosion. This continuous piece of metal being securely riveted to the foundation makes it impossible for the springs to become loose, and greatly strengthens the foundation. The springs are bent so as to make a uniform curvature around the bottle, and admit of an adjustment of sev-

Echinacea.

Dr. A. B. Matthews, in the *Georgia Practician*, May 15, 1905, says that this drug has been so satisfactory in the treatment of septic conditions that it has been termed a "corrector of blood dyscrasia" and that he has used the remedy in every stage of life, from infancy to extreme old age, with no deleterious results but with gratifying experience in relieving many almost helpless conditions of the various forms of blood poison.

We have collected a large amount of information about echinacea which we would be glad to place at the disposal of any physician who may request it.

Yes, we are thus advertising Eusoma (Echinacea Compound), which is simply echinacea in the form best adapted to both its local application and its internal administration. There is nothing secret about the preparation.

Samples sent upon request.

THE EUSOMA PHARMACEUTICAL CO.,
C. S. Chamberlin, M.D., Pres.,
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"Three teaspoonfuls of cod liver oil will never be replaced by three teaspoonfuls of cream or other fat. —Dr A Jacobi
Therapeutics of Infancy and Childhood 3d ed. p. 127.

AS an addendum to Dr. Jacobi's statement, it can be affirmed with equal positiveness that three teaspoonfuls of Hydroleine—the pancreatized Emulsion of Cod-liver Oil—will never be replaced by three teaspoonfuls of the ordinary, mechanically-formed emulsions. If you doubt this statement a trial will convince you of its truth. Write for sample and literature.

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eral millimeters when the bottles vary in diameter. Springs bent at a right angle admit of no adjustment. The metal-covered flanges to keep corks in are also a distinctive and valuable feature of their cases.

MOBILE, ALABAMA, Oct. 17, 1900.

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GENTLEMEN—For a long time I have looked for a syringe which would thoroughly distend the vaginal folds in order to cleanse each one from any deposit or formation of deleterious matter existing therein. I have given your Marvel Whirling Spray a severe test, and I am glad to say that it is exactly what I require in every case of vaginal irrigation, for I am now convinced that the Marvel Syringe will, through its action, permit no secretion to remain after following the directions as given. I always recommend the Marvel Syringe and the Marvel Antiseptic Tablets to my patients.

Very truly yours,
JOHN J. MCMAHON, M.D.

EVERY doctor has among his patients someone who is addicted to the excessive use of liquor. The great difficulty has been to find a remedy which would not leave the patient in worse condition than before administering. Antidipsole will relieve the taste, restore the nerves to their normal condition, leaving the patient as well as before the habit was acquired. It is not a nostrum. The formula is on each bottle. Write Peter-Neat-Richardson Co. for particulars. (Louisville, Ky.)

THE THERAPEUTIC VALUE OF PEPTO-MANGAN (GUDE).—The number of older iron preparations is so considerable that it seems on first sight desirable to weed out some of them, rather than to add to the list. If in spite of this the newer preparations have gained the upper hand, the cause must be sought, not in the attractions of novelty, but in the force of success. Hematogen, which is known to almost every one, has been so popularized and so extensively used that there seems to be a disposition already to value it less

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for its blood-forming power than for its appetizing, antiscrofulous, and roborant action.

While I am persuaded of the value of this remedy, which I have prescribed quite frequently and fully appreciate its merits, I have not been able to confirm the statements of those who esteem it on account of its being well tolerated, and have reached contrary conclusions on this point. The custom of many clinicians and experienced practitioners is not to interrupt at once ferruginous medication after the disappearance of the chief symptoms, but to continue it for some time is in many instances impossible with hematogen. It has repeatedly happened to me, more often in adults than in children, that the patients refuse to continue the use of hematogen after taking the first bottle. They state that it is too powerful and too satiating, and this is the case, not only with irritable and sensitive persons, but those who have an energetic and resolute disposition, and who can be persuaded to resume its use, but finally manifest such a decided repugnance towards the remedy that their wishes must be gratified and another preparation substituted. In such cases I was led to resort to Pepto-Mangan (Gude), which I must credit with being much better tolerated and more agreeable. My observations extend now over a large field, comprising patients of various ages and conditions of life, so that I am able to formulate a reliable opinion of this preparation in the following conclusions:

1. Pepto-Mangan (Gude) is incontestably a blood-forming preparation, and in this respect is fully equal to every other preparation.

2. Its use is therefore recommended in all those diseases in which, through an increase of blood and improvement of its quality, a cure or a beneficial influence upon the organism is to be expected; as for instance, in chlorosis, anemia, leukemia, in chronic diseases of the respiratory organs, in many digestive disorders, especially after diarrheas, and in convalescence from various diseases, especially in weak and anemic women after childbirth.

3. Owing to its great palatability and tolerance this preparation does not require any correctives, and is adapted especially in obstinate and protracted disease, in nervous, neurasthenic, and all other persons who are unable to take other iron preparations even for a short time. In people who require iron and are afflicted with nervous dyspepsia Pepto-Mangan (Gude) is not only by far the best ferruginous preparation, but at the same time a stomachic which has a most favorable influence upon the secretory functions of the stomach.

4. Its blood-forming and in general curative properties depend both upon the direct introduction of iron and upon its power of stimulating the appetite and digestion. Owing to its fortunate composition this preparation deserves a general symptomatic employment.

5. Unpleasant by-effects are excluded.

Pepto-Mangan (Gude) therefore constitutes a valuable addition to our list of

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Dujardin-Beaumetz is easily chief in the field of original therapeutic research and in fertility of therapeutic suggestion. This treatise of 491 pages comprises his lectures on the Treatment of Nervous Diseases, General Diseases, and Fevers. This book will soon be out of print. It should be in every well read physician's library.

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remedies. I prefer this preparation, which has never left me in the lurch, to all similar products, and am persuaded that within its field of indications it will prove of equal service to others. As regards the dose, it is advisable in general to follow the printed directions, although in individual cases it may be exceeded without the least untoward effects; for it is one of the prominent advantages of the preparation, that while exhibiting in full its curative effect, it never satiates or becomes repugnant, but permits of administration according to requirements, for a short period as well as many months, and that it is equally well tolerated by children and adults of both sexes without exciting the least aversion.—Dr. Veihmeyer, Haren, Germany.

Disinfection of Genito-urinary Tract.—In all cases where thorough disinfection of the genito-urinary tract is necessary, prescribe cystogen, in five-grain tablets, three or four times a day. This is especially indicated in gonorrhea in all stages, prostatitis, epididymitis, cystitis, etc.—*American Journal of Dermatology and Genito-Urinary Diseases.*

Catarrhal Diseases of the Naso-pharynx.—As the season is now fast approaching when this class of diseases take up most of the physician's time, and are the cause of suffering among more people than all other diseases combined, I wish to say something in regard to a simple and effective treatment of this class of diseases. In this climate this is the commonest of all diseases, there being very few who do not suffer from it in some of its various forms. Chronic nasal catarrh is in most cases a result of repeated attacks of acute catarrh or "common colds." In this short article it is not necessary to go into details or take up time or space with causes and symptoms; every one is familiar with them. My object here is to simply give my plan of treatment, plain and simple, yet eminently successful. In the treatment of these cases every physician is well aware of the fact that cleanliness is in most cases all that is necessary for a cure. Every physician also knows that in order to have a perfect cleansing agent it must be both alkaline and antiseptic. My success in treating these diseases, viz., acute and chronic nasal catarrh, including ozena, acute and chronic tonsillitis, pharyngitis, catarrhal deafness, etc., has been due almost entirely to the systematic and thorough cleansing of the mucous surfaces with Glyco-Thymoline. I have been using this ideal alkaline antiseptic in my practice for years, and have never been disappointed in it.—H. M. Marsh, M.D., Auburn, Ky.

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The original effervescing Saline Laxative and Uric Acid Solvent. A combination of the Tonic, Alterative and Laxative Salts similar to the celebrated Bitter Waters of Europe, fortified by addition of Lithium and Sodium Phosphates. It stimulates liver, tones intestinal glands, purifies alimentary tract, improves digestion, assimilation and metabolism. Especially valuable in rheumatism, gout, bilious attacks, constipation. Most efficient in eliminating toxic products from intestinal tract or blood, and correcting vicious or impaired functions.

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Note the formula of this product. It explains why *Codeine Cough Sedative* occupies so high a place in the estimation of medical men of experience and judgment:

Codeine Phosphate, -	1 gr.	Eriodictyon, -	16 grs.
Ext. Indian Cannabis,	1-2 gr.	Balsam Poplar Buds,	4 grs.
White Pine Bark, -	32 grs.	Chloroform, - -	2 mins.
Wild Cherry, - -	32 grs.	Glycerin, - -	120 mins.

Codeine Cough Sedative allays cough, stimulates bronchial secretion and assists the respiratory apparatus in the elimination of the products of inflammation. It is worthy of trial in obstinate cases that have resisted other medication.

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GENTLEMEN—I wish to congratulate you on the final success of the experiments . . . for the manufacture of Pneumatic and Cushion Rubber Leg Forms for men.

As you are aware, I have taken a deep interest in this invention from the first and have been glad to give my hearty coöperation in the preparation of models, drawings, etc. Few who see the finished article, so simple and effective, will realize the disappointments, time, toil, and expense that have been involved in its production.

The reward of your labor and patience will be the gratification of thousands—the Forms are bound to meet with immense favor.

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DANDRUFF is easily removed by means of Glycozone. Rub over gently the scalp every night before retiring with pure Glycozone. Hydrozone should never be used for that purpose because it would discolor the hair.

Chapped hands can be quickly cured by applying Glycozone at night. Rub well and cover with linen.

Note.—In all cases of skin diseases the surface becomes intensely red after each application of both Hydrozone and Glycozone. This is due to the stimulating action of these remedies upon the healthy tissues, but there is no danger whatever of causing any irritation, and the patient should not mind the pain, although it may be quite severe.

When the diseased surface is exceedingly tender, use Hydrozone, diluted with water, in proportion which may vary with the degree of sensitiveness of each patient.

MANAGEMENT OF PNEUMONIA.—The plan of treatment recommended by Baruch consists: (1) In absolute rest and isolation. (2) Thorough ventilation, abundance of fresh air; plenty of oxygen in this manner will avoid the necessity of later oxygen inhalation. (3) Drink. The patient should receive from four to six ounces of water at 40° F. every hour. He often orders a few drops of hydrochloric acid or other placebo to to taken in four to six ounces of ice water every hour to insure regular administration. (4) Stimulation. This is unnecessary, except in alcoholics who are accustomed to it. Such cases may receive from ½ to 1 ounce of brandy every three or four hours, according to the previous habits. (5) Medication. Baruch is still in the habit of beginning the treatment of all cases of pneumonia with 8 or 10 grains of calomel so as to clear out the system, given dry on the tongue, and the mouth well rinsed with water mixed with calomel before it is swallowed, so as to prevent ptyalism and destroy diplococci in the mouth. Several copious movements of the bowels should follow this; if not, citrate of magnesium is administered. He says avoid the small doses of 1/10 of a grain so frequently administered. They disturb the patient and irritate the intestinal canal. Strychnine is sometimes useful when the first sound of the heart becomes feeble, and should be given hypodermically in doses of 1/60 to 1/30 grain

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ELASTIC CAPSULES 10 MINIMS — DOSE 60 TO 80 MINIMS PER DAY — GLOBULES 5 MINIMS

An unequaled combination of Oil Santal, Bals. Copaiba, Oil Cassia and HAARLEM OIL, of the highest possible purity

OVER 15 YEARS of almost UNVARYING SUCCESS has earned for this Formula the Reputation of a "SPECIFIC."

In Urethritis, Cystitis, Prostatic Troubles, difficult micturition etc.

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every six hours. Small doses of the coal-tar preparations are sometimes good calmative agents. One dose of from 6 to 8 grains of ammonol will produce sleep and quiet the patient. It should not be given oftener than once in twenty-four hours. (6) Hydrotherapy. In children he uses the tub bath, not less than 85° F., with constant friction, for six to ten minutes whenever the rectal temperature is over 102°. Sleep, if natural, should not be disturbed. In adults he does not use the tub bath because of the disturbance to the patient.

The toxemia in pneumonia is rarely so intense as in typhoid, and the temperature yields more readily. He therefore uses wet compresses consisting of three thicknesses of old linen in the shape of an old-fashioned oil-silk jacket or loose waistcoat, open at the shoulders. This is wrung out of water at 60° F., applied around the entire chest, and snugly covered with a similarly shaped piece of flannel, a little larger in size, without any impervious covering. This is repeated every hour while the patient is awake until the rectal temperature reaches 99.5°. It is never removed from the chest unless thoroughly warm. This application fulfils the following therapeutic indications: The gentle shock and reaction following it produces a refreshment of the nervous system; inspiration is deepened; dyspnea, which Baruch thinks is a sign of diplococcus infection rather than pulmonary obstruction, is relieved. The patient brightens up and feels refreshed. Heart failure is prevented. It acts as a direct tonic to the heart. The elimination of toxins is furthered by improvement in the circulation and the quantity of urine increased. Perspiration is another elimination process which is favored. The alkalinity of the blood has been shown to be increased. The temperature is reduced after each cold compress. The abstraction of heat is followed by a reaction which warms the damp linen. He says see to it that the nurse does not apply oiled silk over the compress and make a poultice of it, relaxing the vasoconstric-

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to understand why discriminating physicians prefer Hydroleine to all other forms of cod-liver oil. It's the one emulsion that is prepared by physiological methods to meet physiological needs. It is more digestible, more absorbable, and more utilizable than any other emulsion. It's pancreatized, of course; but that's only half the story. Write for literature and sample. Sold by all druggists.

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tors and making the cutaneous circulation sluggish, which is not desirable. He thinks with this management the crisis is not often observed; lysis is the ordinary resulting process.

After the acute manifestations have subsided, the temperature and pulse being normal, the patient may be allowed to rise, and after a few days to ride out if the weather is propitious, even though the physical signs indicate that resolution is not complete. He has reduced by this method the mortality in his hospital practice from 50 down to only 12 per cent, which, considering the desperate character of the cases, many of them being poor Italians and persons of bad habits, is a very excellent percentage. He claims that this method is based on the conservative tendencies of the human organism, which must not be embarrassed by powerful medicine, but aided and encouraged. Careful watching of the patient and earnest attention to the minutest details are essential to success.

Antidipsole, as it name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. Peter-Neat-Richardson Co., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

A Few Remarks on the Treatment of Erysipelas.—Although much has been written about this condition, little of real value has been said. The time-worn method of prescribing iron internally and topical applications of silver, lead, or other antiseptic or astringent dressing has been often found wanting and disappointing; the condition usually running its entire course of three or four weeks, frequently changing from a simply superficial inflammation to one of a phleg-

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monous form. In my early experience with erysipelas the pus formation was of very frequent occurrence, requiring incisions to evacuate the matter. Summing up now, after a large experience in treating many cases, I have adopted the following successful line of treatment, and in the majority of cases it has proved most satisfactory:

The bowels are first thoroughly acted upon with calomel, followed by a saline purge. For the fever, pain, and headache I give phenalgin and quinine, and hourly doses of tincture of veratrum viride. As a tonic and food I give Bovinine. Locally the wound is kept constantly saturated with Bovinine pure, the dressings being completely changed three times in twenty-four hours. When I have employed this treatment at the outset complications have rarely arisen, and the course of the condition has been modified and materially shortened.—DR. E. E. ROWELL, JR., Stamford, Conn.

AN IMPORTANT DECISION—ICHTHYOL TRADE-MARK.—The Federal Tribunal of Lausanne, Switzerland, recently gave its decision in an appeal against the decision of the Court of Appeal of Berne in the action brought by the Ichthyol Co., Hamburg, proprietors of the trade-mark "Ichthyol," marketed in the United States by Merck & Co., of New York, to prohibit Luedy & Co., Burgdorf, from infringing the trade-mark. The Lausanne court rejected the defendants' appeal and confirmed the former judgment, which ordered that the defendant firm should no longer use for their products names containing in any way the characteristic word "Ichthyol." It was proved that the trade-mark "Ichthyol" is the legitimate property of the Ichthyol Co., and that only this company is able to supply the sulphur preparation known under the name "Ichthyol." The defendants had pretended to supply the same preparation as supplied by the Ichthyol Co., but the court stated that their product differed essentially in composition from the genuine article.—*Chemist and Druggist.*

A PLEA FOR THE TABLET.—"In the first place, compared with pills, tablets have no insoluble coating, nor, when properly made, have they any insoluble excipient added to their composition. For example, antikamnia tablets are made by simple compression, and therefore, if the secretions of the human system affect the medicine administered, it is bound to be absorbed in the quickest possible time, which is always an advantage. Comparing tablets with capsules, greater accuracy in dosage is assured, as experiments have proven. For example, forty tablets of Bisulphate of Quinine, made on a machine, adjusted to five grains each, weighed 199¾ grains on a torsion balance. The most careful druggist knows it would be impossible to do this in filling capsules. The objection some have to tablets is readily overcome by crushing them before administration, and we are glad to

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know that the Antikamnia people take the precaution to state that when very prompt effect is desired the tablets should be crushed or chewed. Antikamnia itself is not unpleasant to the taste, and the crushed tablet can be placed on the tongue and washed down with a swallow of water. It so frequently happens that certain unfavorable influences in the stomach may prevent the prompt solution of tablets, that this suggestion is well worth heeding. This, however, does not apply to Antikamnia Tablets, for they disintegrate at once, as soon as they come in contact with moisture. Drop a tablet in a glass of water and be convinced of this. Proprietors of other tablets would have better success had they given more thought to this question of prompt solubility. Antikamnia and its combinations in tablet form are great favorites of ours, not because of their convenience alone, but because of their prompt and uniform therapeutic effect."—*Journal of Practical Medicine.*

My oldest son was troubled with a skin eruption on his chin and forehead (between the eyes), which he seemed to have caught at school. It resembled a ringworm in some particulars, but was very stubborn, and hard to cure; so I sent to you for samples, believing, through past experience with Resinol, that it would do the work. After the first application I could see the improvement, and inside of a week his face was clear again. It is one of the greatest remedies I know of for those nasty, inflamed, raw looking, and rapidly growing sores so often seen on schoolchildren's faces, and will cure them every time. I have prescribed it extensively in my practice for some years past, and always with success.—JOHN HUSSON, M.D., 418 W. 124th Street, New York City.

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A. A. Marks:

DEAR SIR—It gives me great pleasure to say that the artificial hand made and fitted from measurements is perfect in every respect. People do not suspect me to be a one-armed man, as the "artificial hand" looks so natural. I can hold a book or paper in my rubber hand. With the hook and ring attachments I can do most any kind of work; people are surprised to see how well I get along. God bless A. A. Marks, the inventor and manufacturer of artificial limbs. I can write with my hand, hold a knife to trim my finger-nails on my left hand.

Very truly yours,

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Chloroform Throat Lozenges

IN the treatment of sub-acute and chronic inflammations of the pharynx and tonsils, and similar affections attended with local irritation, our *Chloroform Throat Lozenges* are highly efficacious.

THEY CONTAIN NO OPIUM

or other narcotic drugs—a fact which should commend them to physicians who do not take kindly to heroic measures in the treatment of ordinary faucial inflammations.

[Composition: Chloroform, cubeb, capsicum, anise, licorice, sugar, acacia, peppermint and linseed.]

Pound bottles; also screw-cap vials of about 55 each.

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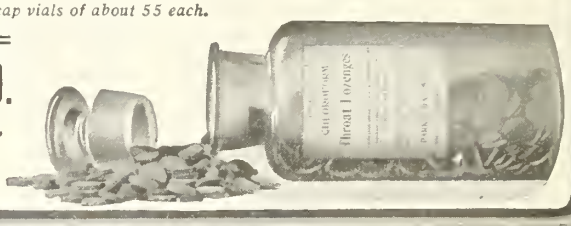

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THE ordinary sulphur candle, which is apt to burn fitfully, and to go out entirely upon contact with the slightest draught, is a fruitful source of annoyance.

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THEY BURN, AND BURN STEADILY!

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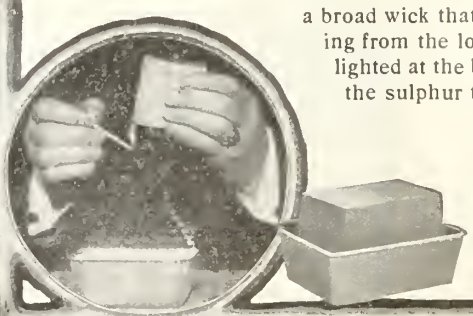

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Guarding your rights along these lines as carefully as we do, we beg of you to read the announcement of our advertisers, and favor them with inquiries and requests for samples; and when so doing, please be so kind as to mention having seen the advertisement in the MEDICAL AGE.

To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

MEDICAL INTERNE.

GOVERNMENT HOSPITAL FOR THE INSANE.
June 6-7, 1906.

The United States Civil Service Commission announces an examination on June 6-7, 1906, to secure eligibles from which to make certification to fill at least two vacancies, at $600 per annum each, with maintenance, in the position of medical interne, Government Hospital for the Insane, Washington, D. C., and vacancies as they may occur in any branch of the service requiring similar qualifications.

The Department states that it reserves the right to continue or terminate appointment at the end of one year, or to promote the appointee at the expiration of that length of service.

Two days will be required for this examination.

Age limit, 20 years or over on the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

Applicants must indicate, in answer to question 15 of the application form, that they are graduates of reputable medical colleges.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

Issued April 4, 1906.

Dr. Walter Bensel, of 135 W. 87th Street, has been engaged for many years in preparing physicians for such examinations, and if any of our readers contemplate trying for the vacancies above mentioned we would suggest their writing him for further information.

THE MEDICO-CHIRURGICAL COLLEGE —A Philadelphia Institution that Has Made Rapid Progress Within Recent Years.—Not only Philadelphia but the medical profession of the whole country is proud of the work that is being accomplished by the Medico-Chi College. There are privileges and advantages connected with this college that make it one of unusual efficiency, and the students who are graduated from it are thoroughly equipped for successful work in their chosen profession.

The clinical facilities at the college are unexcelled, there are always many accident cases and dispensary visitors, affording students exceptional opportunities for practical work. The amphitheatre is the largest and finest in the world, the hospital, recently reconstructed, is thoroughly modern in every respect, and the new laboratories have been especially planned and equipped for individual work. Other noteworthy features are: Free quizzes, limited ward classes, clinical conferences and modified seminar

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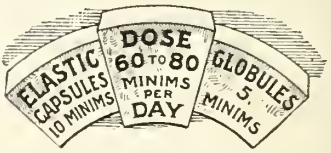

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methods. There is also a Department of Dentistry and a Department of Pharmacy, in each of which degrees are granted.

Illustrated catalogue describing courses in full and containing all information as to fees, etc., sent on request.

Spraying for Diseases of the Respiratory Passages.—Dr. David Walsh, senior physician to the Western Skin Hospital, London, writes: "Glyco-Thymoline was brought to my notice as an excellent lotion for nasal and oral sprays and washes. On due inquiry it was found to fulfil the two conditions usually recognized by medical men in the United Kingdom as vouching for the character, so to speak, of such a preparation. First, its advertisements are accepted by our three leading journals, the *Lancet, British Medical Journal,* and the *Medical Press and Circular.* Secondly, its composition is not a secret, its formula being freely published. Under these circumstances I determined to try the effect of this preparation in a few suitable cases. As a general antiseptic fluid that does not coagulate albumen, and is non-irritating, deodorant, and practically non-poisonous, Glyco-Thymoline has clearly a wide range of usefulness. My own observations, however, have been practically confined to its use in the nose and mouth, with results that have proved satisfactory in every instance, especially in acute coryza, pharyngitis, influenza, and septic conditions of the mouth.

The Rationale of the Use of Iron in the Treatment of Phthisis.—It is a singular, yet significant, fact that, with the exception of a single disease, there is always a slight diversity of opinion among physicians as to which one of a number of agents exercises the greatest curative influence upon a given disorder.

The one exception is phthisis. The entire profession is united in the conviction that pure air, more than any other

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Therapeutics of Infancy and Childhood 3d ed. p. 127.

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one factor, exerts a controlling influence upon the development of phthisical manifestations. Indeed, physicians concur in the opinion that, with the proper quality and quantity of atmosphere, this most wide-spread and fatal of all human maladies can oftentimes be cured.

While the beneficial influences of climate upon phthisical individuals has long been recognized by the profession, a perfect understanding of the exact manner in which atmosphere arrests the progress of the disease is a comparatively recent acquisition.

The opinion at one time obtained that mountainous and elevated districts were beneficial to phthisical subjects on account of the elevation alone. Recent investigations have disproved this theory. It is now an accepted fact that elevation, *per se,* is of little or no importance. On the contrary, the seashore is ofttimes better adapted to phthisical individuals than regions of a much higher altitude.

While it is true that the higher the altitude, the less prevalent is phthisis, the explanation is that atmospheric impurities are less abundant and ozone is more plenteous in such regions than elsewhere. In other words, it is conceded that the absence of atmospheric impurities and the presence of ozone are the chief elements in the cure of phthisis, and that any section, high or low, which affords these elements is advantageous to the phthisical individual.

The benefit derived by consumptives from living in or near pine forests, is a matter of common observation. The turpentine exhaled from pine trees converts oxygen into ozone, and the atmosphere is thus purified by the process of oxidation.

Having repeatedly proved that the direct inhalation is of little, if any, benefit, we are forced to the conclusion that it is not ozone which arrests the progress of phthisis, but the systemic oxidation which is brought to the maximum by the inhalation of a perfectly pure atmosphere.

In fine, we are now agreed that if systemic oxidation can, in any manner, be maintained at the proper standard of

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activity without exhausting the vital forces of the subject, the progress of phthisis can be checked, and very frequently completely cured.

Although the benefits derivable by phthisical individuals from an atmosphere that is conducive to a full measure of systemic oxidation are immeasurably great, the fact remains that it is not always within the power of the physician to induce the patient to move to a region affording such an atmosphere. The patient may, through inability to pursue his avocation, be financially unable to make a change of residence, or he may be influenced by the optimism peculiar to phthisical subjects, to postpone the change until the disease has progressed too far.

When, for any reason whatever, it is not possible to change the abode of these subjects, it is within the power of the physician to check the progress of the disease by the augmentation of systemic oxidation.

While all forms of iron increase systemic oxidation by converting the oxygen in the economy into ozone, the mucous surface of the alimentary tract of phthisical subjects is usually too enfeebled to absorb iron unless it is presented in the organo-plastic form. For this reason, Pepto-Mangan (Gude) affords results which cannot possibly be secured from any other preparation of iron.

In addition to promoting oxidation to a surprising degree, Pepto-Mangan (Gude) invigorates the digestive functions and increases the nutritive processes most markedly. The appetite of the patient is improved, the wasting is arrested, and the vital resources are greatly enlarged by the continued employment of the preparation.

Every doctor has among his patients someone who is addicted to the excessive use of liquor. The great difficulty has been to find a remedy which would not leave the patient in worse condition than before administering. Antidipsole will relieve the taste, restore the nerves to their normal condition, leaving the patient as well as before the habit was acquired. It is not a nostrum. The formula is on each bottle. Write Peter-Neat-Richardson Co. for particulars. (Louisville, Ky.)

Virginius Harrison, M.A., M.D., professor of materia medica and therapeutics, University College of Medicine; visiting physician to the Virginia Hospital, Richmond, Va., reported on "Local Anesthesia" in the *Virginia Hospital Bulletin,* October 15, 1904. Regarding Eucain he said the following: "The advantages of Beta-Eucain over cocaine are important, sufficiently so to make us use it in place of the more dangerous agent. It is much less toxic; can be sterilized by boiling and keeps for a long time. It has no effect upon the pupil, while cocaine dilates the latter. A 3½-per-cent solution should be used. A dentist tells me that he uses a saturated 3½-per-cent solution of Eucain in cold water for tooth extraction, and has never seen any bad

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effects therefrom, though he had much trouble from cocaine in a far weaker solution. Wherever cocaine is used Beta-Eucain can be substituted with the advantage of safety to the patient and lessened anxiety to the doctor."

In a paper on "Local Anesthesia in Major and Minor Operations on the Ear," Drs. G. P. Marquis and O. H. Kraft, of Chicago, report a method of producing local anesthesia in otology which was perfected at Prof. Politzer's clinic in Vienna, and which they there had occasion to study during their term of service. A solution of one per cent Eucain with 5 drops of tonogen (an Austrian extract of adrenal gland) is used. In the report the technique is fully detailed and illustrated; but justice cannot be done it in an abstract, and we therefore beg to refer to the original, which appeared in the *Journal of the American Medical Association,* April 22, 1905.

We are in receipt of the April issue of *The Bloodless Phlebotomist,* published by the Denver Chemical Manufacturing Co., who plan to make this the most unique of the so-called house publications of the country, in that it will contain a large amount of really original matter and a minimum of Antiphlogistine information. Among the leading articles in the current number are:

"Proprietary Remedies from the Physician's Standpoint," by W. J. Robinson, Ph.G., M.D., of New York.

"The Lesson of the Yellow Fever Epidemic," by Daniel Lewis, M.D., LL.D., of New York.

"Delirium Tremens," by T. D. Crothers, M.D., of Hartford.

"The Alkaloidal Treatment of Pneumonia," by W. C. Abbott, M.D., of Chicago.

"Otitis Externa Circumscripta," by Prof. James A. Campbell, M.D., of St. Louis.

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IN the treatment of sub-acute and chronic inflammations of the pharynx and tonsils, and similar affections attended with local irritation, our *Chloroform Throat Lozenges* are highly efficacious.

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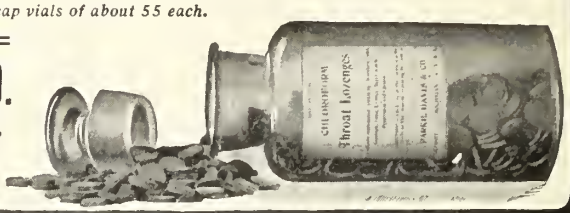

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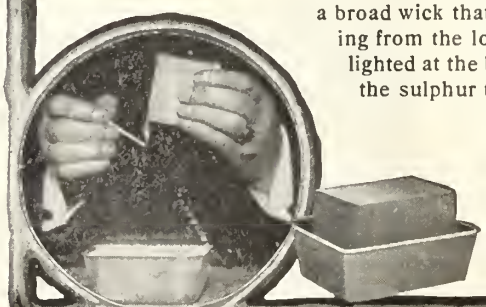

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CHRONIC AND RECURRENT COUGHS AND THEIR TREATMENT.—In treating coughs we quite often encounter obstinate cases, which, no matter what combative measures may be instituted, will continue without abatement. Such cases are best classified as the chronic cough and the recurrent winter cough. Both of these classes are extremely obstinate in their course and yield reluctantly to treatment. They are usually of long duration, and while not in themselves directly dangerous, may become so by inducing emphysema and bronchiectasis.

In the great majority of chronic and recurrent winter coughs, the basic trouble lies in a low form of inflammation of the bronchial mucous membrane; especially that of the bronchioles.

In many cases I have used Codeia, but lately I have been having much more success with another derivative of opium, *i.e.*, Heroin. In comparing the results obtained from the use of these two drugs, I notice that heroin will not constipate the patient, nor will it have the stupefying effect characteristic of codeine. Another advantage possessed by heroin is that it is effective in young children, in very small doses.

I had been accustomed to prescribe heroin alone, but about a year ago my attention was called to a preparation of that drug—Glyco-Heroin (Smith). Upon giving it a good trial I found that it gave me better results than obtained when heroin alone was given, and much more quickly. Glyco-Heroin (Smith) has one distinct advantage over plain heroin in that it can be given for a long time without ill effects, and in the class of patients in question this is, indeed, a most important feature. During the past year and a half I have treated a number of cases and recurrent winter coughs with Glyco-Heroin (Smith) and have obtained uniformly good results.

Example.—A. L., salesman, aged twenty-eight. I saw this patient early in the spring of 1903. He is robust and of good habits. He consulted me concerning a constant cough which had troubled him for over a year. It was usually worse in the morning and after meals, and accompanied by expectoration of thick mucopurulent matter, sometimes blood-stained, and especially so after a severe paroxysm. This circumstance preyed upon his mind considerably—he thought he had consumption. I learned that he had had a severe attack of acute bronchitis during the spring of 1902, and had been coughing ever since. Physical examination excluded tuberculosis. The diagnosis was chronic bronchitis, sequential to acute. The patient was immediately put on Glyco-Heroin (Smith), and the same hygienic measures ordered as in Case 1. Here again the financial condition of the patient precluded change of climate. In addition to the Glyco-Heroin (Smith) the patient was given syrup of hypophosphites as a tonic. I did not see him again until last October. He then reported himself absolutely free from cough. He continued taking the Glyco-Heroin (Smith), and during the present winter has not experienced any return of the trouble. In this case a complete cure was effected by means of quieting the cough and stopping the irritation of the mucous membrane, in this manner allowing the restorative powers of the body, aided by the tonics and good hygiene, to accomplish a cure.

Example.—Miss R. M., aged twenty-

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A pressing need has been provided for in the publication, a few weeks since, of

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With Operations on Nose and Throat

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four, teacher. This lady had been coughing ever since she was nineteen years of age. At that time she had had an attack of rheumatism with a complicating bronchitis. After the acute condition had moderated, she continued to cough, the cough being very annoying in character, spasmodic and prolonged. After each paroxysm she was left in a state of exhaustion. During the attacks she urinated involuntarily. On examination she was found to have chronic bronchitis, aggravated by an exceedingly irritable condition of the respiratory tract. The mere odor of cigar smoke was sufficient to induce a paroxysm of coughing. In treating this patient it was necessary to devote attention to a neurasthenia as well as the chronic bronchitis. She was placed on a diet and her mode of living regulated. Arsenic, strychnine, and iron in pill form were given. For the cough I ordered Glyco-Heroin (Smith). The improvement was marked and rapid. The general nervous condition became much improved and the cough grew much less severe and gradually lost its spasmodic character. At the present time it amounts to but little more than a "clearing of the throat." This case, more than any other, demonstrated the excellent properties of Glyco-Heroin (Smith). The quick relief afforded was surprising and no more gratifying to the patient than to me.—Abstract of article by J. E. ALTER, M.D.

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

Thirty-seven years of continuous use and the unqualified endorsement of a large number of the foremost physicians of England, Canada and this country have proved conclusively that as a means for exciting the appetite, increasing the digestive powers, and stimulating the nutritive processes generally, Colden's Liquid Beef Tonic is remarkably efficacious. Write for sample and literature. Sold by all druggists.

Dose: Two tablespoonfuls ten minutes before each meal.

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for more than twenty years, overcome these difficulties. These cocoa butter shells, which are provided with conoidal self-sealing stoppers, are all made from the purest cocoa butter procurable. They are firm and smooth, may be easily and quickly filled with any medicine, and are hermetically sealed by the stoppers. The hollow suppositories assure even medication and perfect solubility, and are of such a shape that when the large or stoppered end is inserted the contraction of the sphincter ani forces them up into the rectum without the use of a suppository syringe or any other appliance whatever. The Gibbs Hollow Suppositories are made in eight sizes, and are adapted for anal, nasal, urethral, cystic, vaginal, and intra-uterine medication. The suppositories are put up in wooden boxes, each suppository standing upright in a compartment by itself, convenient for filling and sealing with the stoppers without handling or removing from the box, thus furnishing a most convenient means of easily and quickly preparing a firm, smooth, and evenly medicated suppository. The suppositories may be obtained from any druggist or direct from the agents, Messrs. Schieffelin & Co., New York.

CYSTOGEN-LITHIA EFFERVESCENT TABLETS.—The many indications for the use of lithia in combination with cystogen have resulted in the preparation of cystogen-lithia effervescent tablets. Physicians will find these tablets of special value in the treatment of many conditions suggesting the addition of lithia as increasing the efficiency of cystogen. In rheumatism, gout, urinary deposits, ammoniacal urine, cystitis, etc., cystogen-lithia hastens the excretion of urates and uric acid and prevents the formation of calculus. These tablets are composed of cystogen 3 grains, lithium tartrate 3 grains, usual dose, one to two tablets three or four times daily, dissolved in half a glass of water. Samples will be sent to physicians addressing the Cystogen Chemical Company, St. Louis, Missouri.

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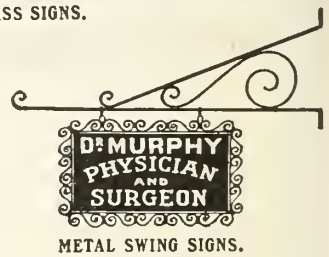

METAL SWING SIGNS.

SENT TO SAN FRANCISCO.—A large quantity of Creolin-Pearson, enough to make over half a million pounds of this ideal disinfectant, was donated and forwarded by Merck & Co. to the authorities of San Francisco, immediately after the earthquake and fire had destroyed that beautiful city. The shipment was accompanied by instructions as to its most effective use, printed in several languages. The accompanying illustration, giving directions in Chinese for the use of Creolin, shows that the Celestials were not forgotten.

臣杷連都裏枯
(CREOLIN-PEARSON)
勻攪水用
力侖之藥胃此
謹水一料一藥
佈之半一一切專
多能大不治
極開玻潔傅
有四璃之染
功卡杯症感

THE enterprise and courage of the members of the San Francisco drug trade were clearly exemplified during the recent disaster. Before the fire was extinguished they placed large orders with the manufacturing chemists. One house ordered 30,000 pounds of Antiphlogistine, and altogether over 100,000 pounds were shipped to the coast upon order within a week.

On a steamer from New York, running up the California coast at the time of the earthquake, were 35,000 pounds of Antiphlogistine, and upon orders from the home office the emergency hospitals were liberally supplied free of charge.

ANTIDIPSOLE, as its name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. PETER-NEAT-RICHARDSON CO., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

NEURALGIAS FROM ALCOHOL AND OPIUM EXCESSES.—A recent number of the *Quarterly Journal of Inebriety,* published under the auspices of the American Association for the Study and Cure of Inebriates, Hartford, Conn., U. S. A., says: "Antikamnia Tablets are one of the best remedies and are very valuable as a mild narcotic in neuralgias from alcohol and opium excesses. We have used them with best results." The *Edinburgh Medical Journal* (Scotland) says regarding Antikamnia: "In doses of one or two tablets it appears to act as a speedy and effective antipyretic and analgesic." The *Medical Annual,* London, Eng., says: "Our attention was first called to this pain-reliever by an American physician whom we saw in consultation regarding one of his patients who suffered from locomotor ataxia. He told us that

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TABLES FOR DOCTOR AND DRUGGIST

Compiled by ELI H. LONG, M.D.

Comprising Tables of Solubilities, Reactions and Incompatibles, Doses and Uses of Medicines, Specific Gravity, Poisons and Antidotes, Thermometric Equivalents, and the Metric System with rules for its easy adoption. Second edition—enlarged and revised. The only work of the kind.

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nothing had relieved the lightning pains so well as antikamnia tablets, which at that time were practically unknown in England. We have since used them repeatedly for the purpose of removing pain, with most satisfactory results. The average adult dose is two tablets, which may be repeated every two or three hours without fear of unpleasant symptoms."

Beta-Eucain Hydrochlorate for Infiltration Analgesia. — Barker's method of effecting local analgesia by means of Eucain-adrenalin solution gives most satisfactory results. The infiltration of his solution causes a complete analgesia lasting for several hours, the anesthetic effect of the Eucain being considerably enhanced and its duration much extended by adrenalin, which actively contracts the arterioles, limits the blood supply, and retains the Eucain in position.

Rarely or never is more than 100 Cc. (3½ ounces) of a 1:500 Eucain solution required, and usually 10 to 30 Cc. suffice. Powders containing 3 grains Beta-Eucain and 12 grains sodium chloride are kept on hand; 3½ ounces of distilled water is boiled and a stock powder is added, this giving a sterile and isotonic 1:500 Eucain solution. When cooled, 18 drops of adrenalin 1:1000 is added. Only as much solution as is immediately required should be made, as adrenalin loses its properties when the solution stands. A good hypodermic syringe, which can be boiled, is essential.

In order to master the technique I began with minor operations, such as circumcision and ingrowing toe-nails. By infiltrating the nerves say at the sides of a finger one gets complete analgesia below the point of infiltration, and there is no local swelling to obliterate anatomical land-marks. I have lately used the Eucain-adrenalin solution in the following cases: Removal of a cystic tumor on the periosteum of the scalp; removal of a fibroma on the posterior aspect of the left trochanter, involving dissection from the bone; opening a knee-joint and removing loose cartilage; excision of five varicose veins; excision and ligature of external piles in a case where chloroform was inadmissible; opening and draining an abscess of the liver; varicocele; and laparotomy for perforating enteric ulcer. A peculiar feature of several cases was that though analgesia was complete, anesthesia was not. On questioning the patients replied that they felt no pain, but some knew when the knife was cutting.

Adrenalin

POWERFUL ASTRINGENT HEMOSTATIC AND CARDIAC STIMULANT

SOLUTION
ADRENALIN
CHLORIDE
1:1000
A solution of the blood pressure raising principle of Suprarenal Gland.
Adrenalin chloride, 1 part.
Physiologic Solution Sodium chloride (with 0.5 per cent. Chloretone), 1000 parts.
PARKE, DAVIS & CO.
DETROIT, MICH., U.S.A.

AS is now generally known by physicians, *Adrenalin* is the name given to the astringent, blood-pressure-raising principle of the adrenals (or suprarenal glands), first isolated by Dr. Jokichi Takamine. It is a grayish-white powder, in which form, however, it is not in demand for therapeutic uses, the preparation most largely employed being

Solution Adrenalin Chloride

(1 to 1000)—1 part Adrenalin Chloride, 1000 parts physiologic solution sodium chloride. Widely useful in diseases of the eye, ear, nose, throat, vagina, urethra, etc., and in all forms of hemorrhage. Supplied in ounce vials.

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Adrenalin Inhalant—1 part Adrenalin Chloride, 1000 parts neutral oil. An excellent application in inflammatory affections of the nose and throat—nasal catarrh, hay fever, pharyngitis, tonsillitis, laryngitis, etc. Supplied in ounce vials.

Adrenalin Suppositories—1 part Adrenalin Chloride, 1000 parts oil of theobroma. Adapted to the treatment of a variety of rectal diseases—hemorrhoids, hemorrhage, etc. Supplied in boxes of one dozen.

Adrenalin Ointment—1 part Adrenalin Chloride, 1000 parts of a bland, oleaginous base. Efficacious in inflammations of mucous surfaces—notably in affections of the ear, nose, urethra, vagina, etc. Supplied in collapsible tubes, with elongated tip.

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Within the 40 pages of text of the AGE, not a single line of advertising is ever printed. There are no advertising inserts; no commercial notes of any description whatsoever. We regard each subscription as a contract with the physician to furnish him semi-monthly with 40 pages of the most reliable information that can possibly be collated.

Guarding your rights along these lines as carefully as we do, we beg of you to read the announcement of our advertisers, and favor them with inquiries and requests for samples; and when so doing, please be so kind as to mention having seen the advertisement in the MEDICAL AGE.

To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

HOSPITAL INTERNE (MALE) — EXAMINATION FOR PANAMA CANAL (July 5–6, 1906).— The United States Civil Service Commission announces an examination on July 5–6, 1906, to secure eligibles from which to make certification to fill vacancies in the position of hospital interne (male) under the Isthmian Canal Commission, on the Isthmus of Panama, as they may occur.

As an insufficient number of eligibles to meet the needs of the service resulted from the examination held on December 6–7, 1905, for this position, qualified persons are urged to enter this examination.

Men only will be admitted to this examination, for which two days will be required.

Each applicant for the Isthmian Canal Service will be required to submit to the examiner, on the day he is examined, a recent photograph of himself, taken within three years, which will be filed with his examination papers, as a means of identification in case he receives appointment. An unmounted photograph is preferred. The date, place, and name of examination, the examination number, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph.

Age limit, 20 to 30 years on the date of the examination; salary, $100 per month, with quarters, but without board and washing.

Only graduates of reputable medical schools having not less than a three years course will be admitted to this examination.

This examination is open to all male citizens of the United States who comply with the requirements. The county officer's certificate in the application form need not be executed. No person will be appointed for service on the Isthmus who is not physically sound and in good health. Persons appointed to positions under the Isthmian Canal Commission will be expected to proceed promptly to the Isthmus Persons examined for positions under the Commission will not be eligible, as the result of such examination, to positions in the United States or Philippine services.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application Form 1312. The medical certificate in Form 1312 must be filled in by a reputable practicing physician No application will be accepted unless properly executed and filed with the Commission at Washington In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

A FEW FACTS. — The expression, The "Best" Tonic, used in connection with Pabst Extract contains a suggestion of olden days which carries one back to the time of Phillip Best in 1844. Who could foresee that his small beginning would result in the mammoth Pabst plant of to-day; the plant where emanates one of the most widely known Malt Extracts on the market? It is logical to suppose, then, that the people at large are interested in the whys and wherefores of the success of this same "Best" Tonic, and it is our pleasure to satisfy that interest.

Pabst Extract, The "Best" Tonic, is a preparation whose ingredients are well known to the medical profession and the

Nothing Like It In English

A pressing need has been provided for in the publication, a few weeks since, of

NASAL SINUS SURGERY

With Operations on Nose and Throat

By BEAMAN DOUGLASS, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital.

Octavo, 266 pages. 67 Full-page Half-tones and Colored Plates, nearly all original.

Cloth Bound; Price, $2.50 net, including delivery.

The object of this work is to supply specialists, advanced practitioners, and senior students with more light on the anatomy, diagnosis, and surgical treatment of pathological conditions of the nasal sinuses. Let the Journal A. M. A. decide as to how this has been accomplished:

"This volume will be welcomed by rhinologists and senior students. The anatomy of the sinuses and their relation to the nasal cavities, orbits, and the brain are illustrated by many fine photographic half-tones. . . . The various methods of examination used in making a diagnosis of the sinus diseases are clearly described. The book is creditable to both author and publisher."
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public at large. It is made from choicest malt and hops. Malt is made from barley, by making the grain sprout, thus producing certain chemical changes which add to its nutritive value and render it easily digestible. The sprouted barley is dried by gentle heat, to preserve its nutrition intact, and is then called malt. The food elements of this malt are converted, by scientific process, into liquid form, resulting in an extract which is added to lupulin, or the extract of hops. This combination forms one of the most valuable preparations known to science, and is called Pabst Extract, The "Best" Tonic.

The very fact that the Government Chemist and Board of Judges of the World's Columbian Exposition in 1903 declared Pabst Extract at the head of scientific malt foods, far in advance of anything in the way of malt extracts suited for food or medicine, and accorded it a mark of 100 points of perfection, speaks volumes. Needless to say its quality and perfection have been carefully fostered, the greatest caution being exercised to maintain the standard. This care is evidenced in the complete equipment of the plant in which the extract is made, no money or time being spared to add any new features in the way of machinery, etc., which will improve the product

Pabst Extract, The "Best" Tonic, is strictly speaking a medicinal preparation, and as such is prescribed by many physicians in their daily practice. From actual tests it has proven its right to be called The "Best" Tonic, for it will aid digestion, help the invalid procure natural sleep, help nervous people, feed nerves, combat exhaustion in nursing women, build up the convalescent, strengthen the delicate and overworked, and is equally efficient in maintaining the general health by combating the ills incident to the present high tension of living.

Although Pabst Extract has enjoyed and is still enjoying wide-spread favor with the medical profession, its value as a Tonic has proven its best advertisement, and the sales have increased from year to year until to-day it is sold in almost every civilized corner of the globe.

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Compiled by ELI H. LONG, M.D.

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

Thirty-seven years of continuous use and the unqualified endorsement of a large number of the foremost physicians of England, Canada and this country have proved conclusively that as a means for exciting the appetite, increasing the digestive powers, and stimulating the nutritive processes generally, Colden's Liquid Beef Tonic is remarkably efficacious. Write for sample and literature. Sold by all druggists.

Dose: Two tablespoonfuls ten minutes before each meal.

THE CHARLES N. CRITTENTON CO.,
Sole Agents,
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DR A. J. MAGNIN, Paris, reported in the *Therapeutic Gazette* of January 15, 1896:

In collaboration with Dr. Good and in my own practice, I have often seen beneficial effects from Glycerophosphates in the following diseases:

1. Functional disturbances of the nervous system, especially all forms of neurasthenia. Patients soon complain less of vertigo, headache, insomnia, muscular fatigue, etc. Hysteria particularly seems to yield with comparative rapidity. They rapidly rebuild the impaired nervous system after all serious acute diseases, especially grippe. They quickly and permanently relieve the pains of chronic lumbago, sciatica, and locomotor ataxia.

2. In all cases of organic impairment due to lessened nutrition and oxidation. In diabetes the general condition rapidly improves; the quantity of sugar markedly diminishes and at times entirely disappears. In albuminuria of chronic Bright's disease, or phosphaturia accompanied by diminution of urea, there occurs improvement in health, increase in weight, and lessening of albumin and excess of phosphates. Patients suffering from anemia, chlorosis, chronic gout and rheumatism with cachexia, pulmonary tuberculosis, senile debility and persistent chronic dyspepsia are greatly benefited by the appropriate form of Glycerophosphate.

3. In a great number of osteal affections, such as rachitis, osteomalacia, tubercular affections, certain cases of fracture. Here the Lime and Magnesium salts render the best service.

ANTIPHLOGISTINE renders ready service to the patient and physician by promptness and positiveness of action.

THE sample of Resinol Ointment which came into my hands to-day jogged my memory in regard to your preparations, and reminded me that I have been intending to write you for some time. During the past six months I have twice found it very efficacious. A young lady patient of mine had a very troublesome and unsightly eruption on the back of her neck, extending up behind the ears on both sides. She informed me that she had been receiving treatment for it to no effect for over a month, and I advised

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WANTED.—A physician who is or can be registered in Minnesota and Iowa; good locality. Drug store in village; a good paying position for a good man. Or I will sell my drug stock if physician desires. Write D. M. Hunt, Granger, Minn.

GOOD OPPORTUNITY for young physician. The widow of a physician who recently died offers for sale house of nine rooms with about four acres of land very cheap in a growing village where there is room for another physician. Address F., care MEDICAL AGE

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makes practical for the educated young man to earn his way while obtaining a professional education. Day and evening classes all year. No graduate fails before State boards. Departments of medicine, dentistry and pharmacy. Enter now. Half rates to degree students. All recognized therapeutic methods taught Laboratories and general clinics excellent. Obstetrical clinic largest west of New York. Send for 170 paged illustrated catalog. Address the Dean, **L. D. ROGERS, A.M., M.D., LL.D.**, 441 Dearborn Avenue, Chicago.

her to use Resinol Ointment. The result was a cure in a very few weeks, and three months have passed with no recurrence.

Several months ago I extracted some teeth for two boys and their father, and in a couple of days their mouths and chins were covered with eruptions, much to my discomfiture. Prescribed Resinol and Resinol Soap, and the recovery was remarkably prompt. I could not account for causes in these cases, for I did the work in an antiseptic manner, but will say that I regard Resinol Ointment as an exceptionally valuable preparation.—A. S. WOLFF, D.D.S., 2100 N. 11th Street, St. Louis, Mo.

CINCINNATI, OHIO, Jan. 13, 1906.

The Merz Capsule Company, Detroit, Mich.:

GENTLEMEN—I have no reason to offer for not reordering save that your goods have proven so very good that everything has been cured up in our territory. We are patiently waiting for a new crop of bacteria to consume the stock we are still holding.

Respectfully,
OTTO E. BETZ, Pharmacist.

TREATMENT OF CHRONIC ULCER OF THE LEG OF LONG STANDING.—At the beginning of the present year I was called to a woman, aged fifty-four years, who had a chronic sloughing ulcer for twenty-two years situated on the outside of the left leg, some ten inches long and three inches wide, with indurated edges and some thrombosis of the veins of the inside of the knee. Having first cleansed the ulcer with charcoal poultices for two

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days I applied wet butter cloth and then spread Antiphlogistine over it, after which cotton-wool and a bandage were put on. This was done every day by the patient's friends for four months. The ulcer is now quite healed over and the induration is all gone. She is able to resume her ordinary housework. I publish this case in the hope that it might be useful to others, as Unna's paste and all sorts of methods had been previously tried. I may say that I have no personal interest in Antiphlogistine.—HORATIO W. A. COWAN, M B., C M. Aberd., in the *Lancet*, London, Eng., July 2, 1904

Every doctor has among his patients some one who is addicted to the excessive use of liquor. The great difficulty has been to find a remedy which would not leave the patient in worse condition than before administering. **ANTIDIPSOLE** will relieve the taste, restore the nerves to their normal condition, leaving the patient as well as before the habit was acquired. It is not a nostrum. The formula is on each bottle. Write **Peter-Neat-Richardson Co.** for particulars. (Louisville, Ky.)

ENTEROCOLITIS.—I was called last August to see an eight-months'-old boy who was said to be dying of cholera infantum. He had been treated by two capable men, both of whom agreed that the child could not possibly outlive the day. Every conventional remedy had been tried, and the favorite methods of both men had been exhausted. They frankly admitted that all had been done that could be done. I found the patient almost moribund and displaying all

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the symptoms of a child dying of what I diagnosed as enterocolitis. The symptoms, to my mind, were classic, despite the previous diagnosis. The case was turned over to me at 9 A.M., August 7. A trained nurse was already on this case. She is an unusually competent woman, in whom I have the most implicit confidence. Thus began one of the hardest battles of some years in my experience. I ordered high enemas of Glyco-Thymoline in 25-per-cent solution and warm; used four ounces at a time with a soft-rubber catheter once every three hours. The child could retain nothing, was in frightful pain, and passing constantly thin, foul-smelling discharges tinged with blood. The child was emaciated to the last degree, and for several days before I was called had been in a semiconscious state. The poor little baby was a pitiful sight. For nourishment I ordered several combinations to be administered, an ounce at a time, as a rectal clyster following the enemas of Glyco-Thymoline.

I know it is not good practice to give hypodermics to an infant, but this was a grave case. My predecessor had ordered gr. 1-64 morphine, gr. 1-960 atropine, sub. q. every four hours if needed, with strychnine 1-240 gr. if necessary. I continued this, as the baby was often in intense pain and there seemed to be no other way. This was my plan of campaign, and I am both thankful and pleased that it was successful. The baby improved from the first, but so slowly that it was scarcely discernible to the parents, but the nurse and myself saw it. After three days the child could take some nourishment per oram. I then gave 2 m. of Glyco-Thymoline in one ounce of water every two hours before feeding. It began to have short periods of natural rest, and the discharges were in every way improved. At the end of a week, August 14, the improvement was quite marked, but we did not relax our vigilance. The hypodermics, except of strychnine, were discontinued. The enemas were continued fifteen days, once every three hours, then at less frequent intervals for a month, then once a day for six weeks. The recovery of the little patient was long and slow, but uneventful. The mother and nurse were devoted and ably seconded my efforts. At this time the baby is a strong, rosy youngster.

It gives me great pleasure to tell you of this case. The experience may be of value, and it certainly proved to my satisfaction at least the potential possibilities of Glyco-Thymoline in gastrointestinal work. May you be speeded in your good work.—O. W. COBB, M.D., Easthampton, Mass.

FOR therapeutic efficiency in rapid resolution of the products of inflammation, Antiphlogistine is unexcelled.

Adrenalin

POWERFUL ASTRINGENT HEMOSTATIC AND CARDIAC STIMULANT

AS is now generally known by physicians, *Adrenalin* is the name given to the astringent, blood-pressure-raising principle of the adrenals (or suprarenal glands), first isolated by Dr. Jokichi Takamine. It is a grayish-white powder, in which form, however, it is not in demand for therapeutic uses, the preparation most largely employed being

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TREASURY DEPARTMENT.

Bureau of Public Health and Marine Hospital Service.

WASHINGTON, D. C., July 2, 1906.

A board of officers will be convened to meet at the Bureau of Public Health and Marine Hospital Service, 3 B Street, S. E. Washington, D. C., Monday, August 6, 1906, at 10 o'clock A.M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine Hospital Service.

Candidates must be between twenty-two and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examinations: (1) Physical; (2) Oral; (3) Written; (4) Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade.

Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons two thousand dollars, and surgeons twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty, fifty dollars a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For further information, or for invitation to appear before the board of examiners, address

THE SURGEON-GENERAL,
Public Health and Marine Hospital Service,
Washington, D. C.

LOCAL TREATMENT OF CHRONIC GASTRIC CATARRH.—Prof. J. M. G. Carter sums up the treatment of chronic gastric catarrh in its three stages. During the incipiency of the disease local treatment is not essential, but is always beneficial; washing out the stomach with about two quarts of a five- or six-per-cent solution of

Nothing Like It In English

A pressing need has been provided for in the publication, a few weeks since, of

NASAL SINUS SURGERY

With Operations on Nose and Throat

By BEAMAN DOUGLASS, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital.

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"This volume will be welcomed by rhinologists and senior students. The anatomy of the sinuses and their relation to the nasal cavities, orbits, and the brain are illustrated by many fine photographic half-tones. . . . The various methods of examination used in making a diagnosis of the sinus diseases are clearly described. The book is creditable to both author and publisher."
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Hydrozone gives the most satisfactory results, the washings to be repeated six or seven times a week. Ordinarily, this is all the treatment that is required. In many cases eight ounces (a tumblerful) of a two- or three-per-cent solution of Hydrozone taken half an hour before meals will check the disease, and the lavage need not be resorted to.

In the *second stage*, the inflammatory condition having fully developed, the treatment should be continued. The indication is to thoroughly cleanse the gastric mucous membrane, and this is best accomplished with a five- or eight-per-cent solution of Hydrozone, using the double tube, but where the double tube is not available, the siphon method with the single tube answers well.—PROF. J. M. G. CARTER, M.D., Sc.D., Ph.D., Waukeegan, Ill. (Abstract from *The American Therapist.*)

IN view of the fact that the health of a woman in the pregnant state and the proper development of her unborn are always directly dependent on a blood stream that is qualitatively and quantitatively sufficient for the exigencies of pregnancy, the administration of iron is made distinctly needful by the artificialities inseparably associated with modern life.

In selecting the form of iron to be administered to pregnant women, the utmost discrimination should be exercised. That form of the drug which is most easily assimilated and proves most acceptable to the palate is the one which should be employed. This injunction is made for the reason that the nausea which is incident to the pregnant state must not be increased, and for the further reason that constipation must not be induced by the drug. Again, the nutritive processes must be held at the proper standard, and this cannot be done in the absence of a painstaking selection of the iron to be administered.

Pepto-Mangan (Gude) is the ideal form of iron for these cases. This contention has the support of logic. The hemoglobin-imparting properties and the nutritive potency of the preparation are

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

Thirty-seven years of continuous use and the unqualified endorsement of a large number of the foremost physicians of England, Canada and this country have proved conclusively that as a means for exciting the appetite, increasing the digestive powers, and stimulating the nutritive processes generally, Colden's Liquid Beef Tonic is remarkably efficacious. Write for sample and literature. Sold by all druggists.

Dose: Two tablespoonfuls ten minutes before each meal.

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confessedly greater than those of any other form of iron. Then, too, Pepto-Mangan (Gude) is more readily absorbed and more completely assimilated than any other preparation of iron. Still further, Pepto-Mangan (Gude) produces no untoward effect upon the mucous surfaces of the alimentary tract, nor does it encourage constipation or increase nausea.

In addition to overcoming the anemia and the deficiencies of nutrition, Pepto-Mangan (Gude) adds tone to the blood vessels and reduces to a minimum the softening of the heart walls which always attends the pregnant state.

Certainly one of the most gratifying effects of Pepto-Mangan (Gude) is the increase of physical strength and buoyancy of spirits which the prospective mother derives from its administration. That the unborn participate in the benefits derivable from Pepto-Mangan (Gude) there can be no doubt, for at birth they present unmistakable evidences of physical robustness, and seem well fortified against those illnesses which are peculiar to infanthood. It is also a matter of common observation that the roborant action of Pepto-Mangan (Gude) enables the mother better to bear the strain of parturition.

A SUBSTITUTE FOR SURGERY.—The man with legs like the staves of a barrel is an object of lively interest (to everybody but himself)—an individual who richly merits the commiseration of those happy mortals who possess locomotive appendages that are symmetrical and shapely. In nine cases out of ten he is supersensitive, and his deformity subjects him to no end of embarrassment. But let him take heart. A better day is at hand. Inventive genius, obedient servant of necessity, provides a remedy for this defect of nature, accident or circumstance—whatever its origin may be. And recourse need not be had to the knife.

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more need one want? What are they, did you ask? Contrivances so successful, so sensible and so simple withal as to make one marvel at the tardiness of their coming. Rubber pads, inflated with air and worn inside the legs at the place of curvature—that tells almost the whole story. The Alison Company, of Buffalo, N. Y., make them and market them. The forms do the work, too. If you don't believe it, ask the Alison Company. Tell them to send you the "50 Tributes," a circular embodying letters testamentary of fifty grateful men—all walking advertisements of Alison leg-forms.

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device are easily appreciated, as nearly every doctor has had trouble and inconvenience by not having a reliable container for such and similar fluids as named above.

This bottle is as perfect as money and modern skill can make it. The capacity is ½ ounce to 8 ounces.

ANTIDIPSOLE, as its name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. PETER-NEAT-RICHARDSON CO., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

EVERY physician knows that any preparation containing salicylic acid will cause a relaxation of the symptoms of rheumatism. He also knows that free salicylic acid will cause gastric irritation. Wm. R. Warner & Co. made a study of these facts some years ago, with the result, that after much time, expense and clinical experimentation, they adopted a formula and method for compounding it, neutralizing the corrosive properties of salicylic acid, so as to make it acceptable to the stomach.

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The value possessed by the salts of lithia as uric acid solvent, diuretic and ant-acid are available in this preparation. It is a most happy combination, displaying all of the desirable effects of both Cystogen and Lithia. The effervescence brings about a quick solution in water, producing a perfectly tasteless solution. Water that is too cold retards the effervescence. It may therefore be conveniently taken at meal time in a full glass of water. In cases where this method of administration is contraindicated, it may be taken between meals, always dissolved in considerable water.

These tablets being effervescent, need to be protected from atmospheric conditions, and for this reason are packed in glass tubes containing one dozen tablets in each. Three tubes are packed in a small cardboard box. A tube may be conveniently carried in the vest pocket, so that patients may be expected to take the medicine with regularity. Samples supplied to physicians on request to the Cystogen Chemical Company, St. Louis, Missouri.

ABBOTT'S SALINE LAXATIVE.—It is universally admitted to be desirable to accomplish any necessary therapeutic indication with the smallest necessary quantity of medicine and the least possible interference with the functions of the body. Since we must help, let us give absolutely not a hair's breadth more assistance than is requisite, since further aid ruins self-dependence, both moral and physical. For this reason Abbott's Saline Laxative is superior to the crude salts and saline waters, because when administered in this form the dose is but a small fraction of that required of the raw salts. Saline Laxative also has the unique distinction of being the only saline in the market which, when taken on rising, acts just after breakfast, *once only,* without a particle of irritation or griping, and then stops for the day. Other salines and especially the crude purgative waters will often continue acting at intervals all day long, to the intense discomfort of the victim. The same (efficient) dose of Abbott's Saline Laxative may be continued, if necessary, for years, without needing to increase it.

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THE TREATMENT OF FELON.—In most instances cellulitis is due to trivial injuries which at the time of their occurrence are apt to be overlooked. It is generally of bacterial origin and the severity of the inflammation depends, not only upon the virulence of the microbes, but also upon the resisting power of the tissues. The amount of damage that may result from a trivial traumatism is well exemplified in the case of a felon. This condition is often neglected by the patient until the inflammation has extended down to the periosteum with resulting destruction of the bone. In other cases the infection spreads along the lymphatics, and if the process is virulent it leads to pus formation and sloughing of the tissues. When a cellulitis of the fingers or hand has reached this magnitude nothing but wide incisions and thorough disinfection will effect a cure. In those numerous instances, however, in which the inflammation has not extended deeply nor given rise to destructive changes a trial of Salusol is well justified on the strength of the many reports as to its great value in the treatment of cellulitis. It has strong penetrating properties and is a powerful antiseptic, with the striking advantage that it is non-poisonous. Its antiseptic power has been conclusively established by bacteriological tests, while its innocuousness is demonstrated by the fact that it may be taken in tablespoonful doses internally without the least risk. It will be found that in the earlier stages of cellulitis a compress moistened in a solution of Salusol, one to two parts to five of water, according to the degree of existing tenderness, and covered with a piece of gutta-percha tissue and a bandage, will rapidly relieve the pain and allay the inflammation and prevent it from assuming a destructive character.

RECTAL IRRIGATION IN ENTEROCOLITIS OF CHILDREN.—When we consider that nearly one-half of all the children born die before reaching the age of one year and that by far the greater portion of these die from some form of intestinal indigestion, we realize what an immense field there is for the improvement of our technique in the treatment of these affections. Our infantile mortality could undoubtedly be greatly decreased could all cases be seen and treated actively from the outset. Although a great many are cases of a violent character from the very outset, still there is a certain proportion of a more or less chronic nature, and it is this class of cases which greatly tax the ingenuity and patience of the physician. No medication by the mouth seems efficient to stop the progressive wasting. As soon as food is taken it is passed out without the child absorbing any of it. It is of one of these cases that I wish to present to the medical profession a report, hoping that the methods adopted will be found successful in other cases of a similar nature.

Baby D., aged four months. History: Child was nursed by mother for one and a half months, but as her milk was of poor quality and the child did not thrive, she was advised by her attending physician to stop the breast and substitute bottle. This she did, feeding the child on a mixture of milk, cream, milk-sugar, and barley-water in a 3-6-1 proportion. The baby thrived on this for about two months, but early in July it developed a diarrhea. The mother gave it home remedies, but still continued the milk,

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A pressing need has been provided for in the publication, a few weeks since, of

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With Operations on Nose and Throat

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feeding it even more frequently than before as the child was fretful and apparently hungry. The stools averaged seven to eight a day, and occasionally the child would vomit. This continued for two weeks, when the mother became worried at the progressive emaciation and decided to call a physician. I first saw the case on July 16th.

Examination: Baby extremely emaciated, lies on cot without apparent strength to move; tongue fissured; cheeks sunken; abdomen tympanitic (slight). Temp. 102.2°; weight seven pounds. Stools ten to twelve daily, full of mucus and curds of undigested milk. I gave the mother a very unfavorable prognosis, but told her to secure a nurse for the baby and we would do all that was possible.

Treatment: Milk was stopped at once. Child fed on barley-water and albumen-water. I then ordered the nurse to wash out the colon twice daily through a catheter with two quarts of a solution containing Glyco-Thymoline one part and water ten parts. By the mouth I gave 1/20 gr. calomel tablets every hour for ten hours, and twenty drops of brandy every two hours.

July 17. Child in about the same condition except that it had had only nine stools in twenty-four hours, and they were of a trifle better color, with less mucus and no curds. Continued irrigations, but stopped calomel. Continued with brandy.

July 18. Seven stools, quite watery, but of a much better color. Treatment continued until July 24, at which time the child was much improved, having only three in a day and passing very little mucus. On this date I started the milk again, using a very dilute formula with three ounces of milk from top of bottle, one ounce of lime-water, one ounce of milk-sugar, and fifteen ounces of boiled water. Continued irrigating with Glyco-Thymoline, one to eight, once a day, but stopped all other medicine. The baby started to thrive at once, and in two weeks more we again weighed the child and noted an increase of three pounds. I gradually increased the strength of his food until at the present time he is taking eight ounces of milk to eleven ounces of

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

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water and one ounce of lime-water, which is almost the average for a child of his age (5½ months).

This is only one case of a number that I have treated with nearly the same routine this summer, and all with satisfactory results. I lay the success I have had to two factors: First, the immediate withdrawal of all milk, and second, the continued and copious irrigation. For this irrigation I have tried numerous solutions, but nothing to equal Glyco-Thymoline in a one-to-ten proportion. It appears to cleanse the inflamed colon better than anything else, and in nearly all cases of this nature I have had quick improvement in the character of the stools after its use.

In conclusion I would state that although in this case I did not give much treatment by mouth because the symptoms seemed to point more to a lower bowel affection, yet in many cases where gastric symptoms have been more predominant I have combined with the irrigation treatment Glyco-Thymoline in 15- to 30-minim doses combined with liquor bismuth, as follows:

℞ Glyco-Thymoline, ℥ss;
Liq. bismuth, ℥j;
Aqua, q. s., ℥ij.

M. Sig.: 3j q. 2-3 h.

This in connection with rectal irrigation with Glyco-Thymoline in proportion indicated will suffice in nearly all the cases of gastroenteritis, enterocolitis, and enteritis so common in artificially-fed infants.—CLARENCE G. CLARK, M.D., New York City.

A RARE GIFT.—The New York Botanical Garden has recently received the most valuable single exhibit ever placed in its economic museum. This came from E. Merck & Co., of Darmstadt and New York, manufacturers of chemicals. It is a collection of plant constituents, including alkaloids, glucosides, amaroids, sugars, starches, plant acids, coloring principles, fats, waxes, and some rare aromatic principles. The number of ex-

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hibits is between 400 and 500, comprising not only the most powerful poisons, the most active medicinal principles, and other things for which uses are now known, but many things extracted from plants only experimentally, for scientific purposes, for which it is hoped uses may be developed in the future.

Prof. H. H. Rusby, the curator of the economic museum, says that the collection is worth several thousands of dollars at trade prices, free of duty. It has been imported strictly for scientific purposes from Darmstadt, where it was prepared especially for the Garden. Some of the alkaloids are so valuable that only two or three grains are used to form an exhibit, these being worth as much as $5 a grain. All the exhibits are in show vials, of what is known as the "hour-glass" variety, in which minute quantities are plainly visible. It is the intention of the museum authorities to place on a pedestal, beside each show vial, a large glass jar containing a specimen of the plant or plant part from which the constituent was extracted.—*New York Evening Post*, June 25, 1906.

Every doctor has among his patients some one who is addicted to the excessive use of liquor. The great difficulty has been to find a remedy which would not leave the patient in worse condition than before administering. **ANTIDIPSOLE** will relieve the taste, restore the nerves to their normal condition, leaving the patient as well as before the habit was acquired. It is not a nostrum. The formula is on each bottle. Write **Peter-Neat-Richardson Co.** for particulars. (Louisville, Ky.)

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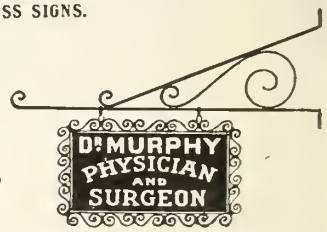

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THAT a person will make a better appearance with an artificial arm properly dressed than by an empty sleeve is obvious. To conceal any physical defect is the natural aim of every one. There is nothing so distressing, especially to a sensitive person, as the exhibition of any impaired part of his anatomy.

The glass eye is worn for no other purpose than ornament. It fills an empty socket, covers a visionless eyeball and conveys the impression that the natural eye is there; it does not restore vision nor actuate the optical functions, yet thousands of them are worn with pride, and a feeling that they are indispensable. They certainly look natural and are to be preferred to the cloth patch so frequently seen. The man with a hunched back pays his tailor very dearly for the skilful adjustment of pads in his coat, so as to minimize the visibility of his deformity.

Any deficiency of the body that is not concealed will attract the attention of the curious, invite comment and excite pity. No person who maintains his self-respect, no matter what his disability may be, cares to be constantly reminded of it, and the commiseration of others, above all things, is the most abhorrent. To be frequently asked: "How did it happen?" "Did you lose your arm in the war?" "Were you in a railroad collision?" or to

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have such utterances as: "Poor unfortunate man!" "How he must have suffered!" "What a terrible loss!" whispered within your hearing, may for a while be accepted in good part, but their repetition soon becomes annoying and odious.

An artificial arm will conceal the loss, restore a natural appearance to the person, avoid observation and comment, and after it has been worn a short time will become companionable and necessary to the wearer's mental comfort.

Every arm sold by A. A. Marks is protected by the following guarantee: The material that is used in construction, the workmanship by which the parts are put together, and the adaptability to the case are guaranteed to be faultless. Should any defects in material, workmanship, or construction be found, the firm of A. A. Marks, by this guarantee, is required to make the same good without charge.

This guarantee is to be in force for a period of five years from the date of the delivery of the limb.

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You can publish this letter in any medical journal you see fit, or I will, as you may suggest.

Yours truly,

C. H. B. GILE, M.D.

THE "Marvel Whirling Spray" is the most wonderful improvement ever made in vaginal injection and suction syringes. It is entirely unlike the old-style, clumsy, solid-stream syringes so long found inefficient and unsatisfactory. It is the most simple, convenient, and effective. Always ready for use, nothing to get out of order, no cumbersome water bags, tubing, valves, or shut-offs, to cause delay and annoyance. The vaginal passage is constructed in folds which overlap one another. For prompt and thorough irrigation, these folds must be dilated or distended.

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EMOLLIENTINE has been pronounced the most efficient antiseptic ointment in use. It may be depended upon to give a good account of itself in the treatment of burns, scalds, bruises, ulcers, inflammatory skin diseases (particularly of parasitic origin)—in fact in any condition in which an emollient antiseptic dressing is needed.

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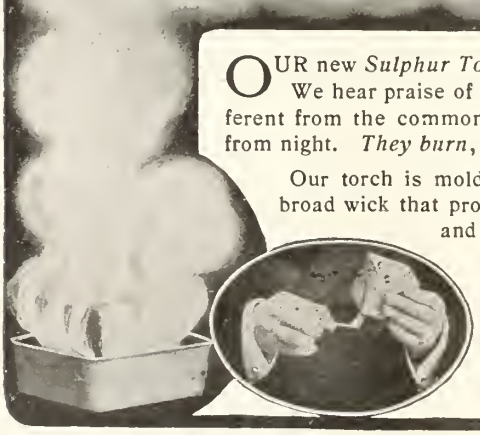

OUR new *Sulphur Torches* are giving genuine satisfaction. We hear praise of them on every side. They are as different from the common, ordinary sulphur candle as day is from night. *They burn, and burn steadily.*

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Within the 40 pages of text of the AGE, not a single line of advertising is ever printed. There are no advertising inserts; no commercial notes of any description whatsoever. We regard each subscription as a contract with the physician to furnish him semi-monthly with 40 pages of the most reliable information that can possibly be collated.

Guarding your rights along these lines as carefully as we do, we beg of you to read the announcement of our advertisers, and favor them with inquiries and requests for samples; and when so doing, please be so kind as to mention having seen the advertisement in the MEDICAL AGE.

To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

NORMAL NUTRITION.—The foundation of perfect health is normal nutrition. Normal nutrition depends largely on normal digestion, and without a normal nutrition there cannot be maintained a normal physological standard. That one may have a perfectly normal digestion, he must have normal glandular secretion of the stomach and bowels, and anything which interferes with secretion of these organs is a disturber of digestion. It is possible to adjust one's foods by means of artificial digestives, but this does not mean normal action of the digestive apparatus nor does it tend to re-establish it, hence nutrition is not at the normal standard. It simply takes the work of digestion on its own shoulders so to speak, but does not cause a better secretion of the necessary fluids. Something that combines the properties of a mild stimulant, a complete nourishment, and, at the same time, influences the secretory apparatus towards normal function, is greatly to be desired.

Bovinine produces this effect completely. It being ready for immediate assimilation in the stomach and bowels, it thereby prevents fermentation and gives the gastro-intestinal tract a rest, while at the same time affording a complete nutrition. It being sterile, ptomaines are not formed, hence autoinfection is not possible.

Diseases, both acute and chronic, depend in a large measure on perverted digestion and nutrition. It is a conceded fact that almost the first symptoms of disease are referable to the stomach and bowels, hence a scientific application of therapeutics suggests the preservation of a vigorous and normal digestion and nutrition. The preservation of good health and the prolongation of youthful appearance and action depends on the power to digest and assimilate foods, and where this is rendered impossible from digestive disturbances, a proper food which will give the gastro-intestinal tract a rest is much desired. Old age comes on apace and is not far distant if through faulty digestion and nutrition the proper physiological equilibrium is not maintained. Disease is warded off by the constant revitalization of the blood. This can only be had by the action of a complete and perfect food that is readily assimilated, and should one be so unfortunate as to require a pathological state of organization, the condition is overcome only by rendering the pathological products innocuous and causing their elimination from the system. Digestion and nutrition meet every indication. Debility is the universal predisposing cause of disease, and debility cannot come, only through faulty digestion and improper nutrition. Consequently, perfect cell metabolism gives health, and by recognizing this fact gives us the key to long life and the warding off of pathological lesions. Nutrition, then, being the foundation of life, it is easy to comprehend why its proper preparation is absolutely necessary. A food which contains every element of nutrition in proper proportion and is sterile, and mildly stimulating, is indicated in every abnormal condition. Physiological functions may be re-stimulated for a time by such tonics as strychnine, iron, alcohol, etc., but very soon they lose their effect and the vital forces are weakened.

Bovinine acts as a tonic by virtue of its assimilable organic iron. It is a food

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By BEAMAN DOUGLASS, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital.

Octavo, 266 pages. 67 Full-page Half-tones and Colored Plates, nearly all original.

Cloth Bound; Price, $2.50 net, including delivery.

The object of this work is to supply specialists, advanced practitioners, and senior students with more light on the anatomy, diagnosis, and surgical treatment of pathological conditions of the nasal sinuses. Let the Journal A. M. A. decide as to how this has been accomplished :

"This volume will be welcomed by rhinologists and senior students. The anatomy of the sinuses and their relation to the nasal cavities, orbits, and the brain are illustrated by many fine photographic half-tones. . . . The various methods of examination used in making a diagnosis of the sinus diseases are clearly described. The book is creditable to both author and publisher."
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complete; containing all elements of the animal, vegetable and mineral kingdoms in a proper proportion. It is mildly stimulating and sterile, and where given the general nutrition rapidly improves and all therapeutics employed by the physician are helped in their physiological action. It is not antagonistic to any treatment and is indicated as a food in all pathological conditions.

PEROXIDE OF HYDROGEN AS A MOUTH-WASH.—Peroxide of hydrogen is conceded to be an excellent remedy in oral and dental disease, but it has not become popular as it rapidly loses in strength, and as many preparations on the market are distinctly injurious to the teeth. H. Koerner finds that none of these disadvantages attach to perhydrol, which is an absolutely pure preparation of hydrogen peroxide (30 per cent by weight and 100 per cent by volume). It is advisable to employ only bottles made of hard glass, poor in alkali. An ideal mouth-wash must be absolutely harmless, since small amounts will always be swallowed accidentally or will be absorbed by way of the oral mucous membrane. It should possess strong disinfecting properties, though it will never be possible to rid the mouth altogether of germs. Lastly, there should also be a mechanical factor in cleansing. The perhydrol mouth-wash fills all these requirements in an ideal manner. It is nontoxic and can even be taken internally in relatively large doses. Extracted teeth may be kept in the solution for weeks without being corroded in the slightest degree. The teeth will not be stained, but, on the contrary, bleached. Bacteriological examination has shown that after irrigating the mouth for one minute with the solution, the number of germs present will be decreased one-half, while after three minutes there will be only one-fourth to one-fifth of the original number. The bacillus acidi lactici, particularly, is rapidly killed, and fermentation is checked. The deodorizing properties are very pronounced, and the mechanical fac-

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

Thirty-seven years of continuous use and the unqualified endorsement of a large number of the foremost physicians of England, Canada and this country have proved conclusively that as a means for exciting the appetite, increasing the digestive powers, and stimulating the nutritive processes generally, Colden's Liquid Beef Tonic is remarkably efficacious. Write for sample and literature. Sold by all druggists.

Dose: Two tablespoonfuls ten minutes before each meal.

THE CHARLES N. CRITTENTON CO.,
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tor in the cleansing is supplied by the numerous gas-bubbles which are given off.

In order to mask any slight taste due to evolved oxygen, a small amount of peppermint oil has been added to the lotion, together with a red organic dye, to give it a pleasing appearance. For use, the wash is diluted with two parts of water and is allowed to act upon the mucous membrane of the mouth for two to three minutes after every meal. In all diseased conditions of the mouth and gums it is best to use the 3-per-cent wash undiluted. —*Aerztl. Viertelj.-Rundschau,* 1906, No. 1.

OBSERVATIONS IN THE TREATMENT OF IRREGULAR MENSTRUATION.—In prescribing a new and comparatively unknown remedy the conscientious physician must work slowly and carefully along lines which are necessarily of a more or less experimental nature! In my own experience I have always found it hard to desert an old, well-tried preparation and transfer my faith to one which, though highly recommended and indorsed by reputable physicians, is known to me only through such recommendations and indorsements! But in the case of Ergoapiol I feel differently; for when I first encountered it the mere name in some way appealed to me as descriptive of a preparation or combination which I thought ought to prove efficient in the treatment of that class of cases for which it is recommended. I have in the latter part of my sixteen years' experience been a great believer in apiol as an emmenagogue, and especially in those painful cases which occur in young girls, who have just reached the menstrual period, and in whom functional inactivity is the chief cause which retards the normal process of nature.

But, after many successes and a still larger number of failures, due, I believe, to the unreliability or instability of the drug, I resorted to viburnum and the

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WANTED.—A physician who is or can be registered in Minnesota and Iowa; good locality. Drug store in village; a good paying position for a good man. Or I will sell my drug stock if physician desires. Write D. M. Hunt, Granger, Mion.

GOOD OPPORTUNITY for young physician. The widow of a physician who recently died offers for sale house of nine rooms with about four acres of land very cheap in a growing village where there is room for another physician. Address F., care MEDICAL AGE.

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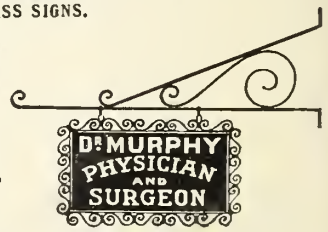

METAL SWING SIGNS.

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PAGES 29 AND 30.

various compounds composing it. My clinical experience with it was fairly satisfactory, but I was still on the lookout for "something better," when it was my good fortune to run across Ergoapiol (Smith). This was only about six months ago, when it was recommended to me, while in consultation with a physician in my locality, and the results were more than satisfactory.

CASE I.—Mrs. J. N. I first saw this case in April of this year, and on inquiry discovered a history of two abortions, both in the third month of pregnancy. A slight leucorrhea has resulted from the first mishap, but after the second one this became aggravated and was accompanied by severe pain in the region of the ovaries and an almost continuous backache, both of which were very markedly increased just previous to and during menstruation. Curettement had been performed twice, but without much improvement, and the menstrual periods began to be irregular, both as to time and quantity of flow.

At first I applied the usual forms of medication, internally and by douche, but while a slight improvement occurred it was not until I put her on Ergoapiol (Smith), as her exclusive internal treatment that I obtained any marked results.

The May period was a week late and somewhat scanty, but those of June and July have come on time, and the amount of flow is almost normal; the pain in back and sides is present in a slight degree, and then only during the first two days of menstruation. The color of the discharge is improved (due perhaps to the later addition of an iron tonic to the treatment), and in a general way she is gaining rapidly. In this case I have never used more than four capsules daily, and that number only for a few days previous to the establishment of the flow and for two days thereafter.

ANTIDIPSOLE, as its name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. PETER-NEAT-RICHARDSON CO., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

DR. F. WALTHER, of Leipzig, reviews the reports on pyrenol published by Ewald's clinic, Redtenbacher's division, Schlesinger, Gruenfeld, Koehler, Silber, Burchard, Komor, Sternberg, Fasano, Maramaldi, Steiner, and others. Pyrenol

is chiefly expectorant, sedative, antipyretic, and antirheumatic. It does not affect blood-pressure and pulse, as almost all salicylates do; on the contrary, it is tonic and stimulant. Stomach and intestines are in no way injured even by its continued use; the appetite improves. All authors are agreed that it has no untoward effects of any kind.

Its most striking results are seen in asthma, where it produces material relief, even of the dyspnea. Secretion is lessened, and the attacks are rendered milder and often checked altogether.

It is almost as valuable in pertussis diminishing the number and the intensity of the spasms.

It acts exceedingly well in croupous and catarrhal influenza, influenzal pneumonia, acute bronchitis, and typhoid. Here its antipyretic action is supported by its expectorant and analgesic virtues

Its content of salicylic acid, which is chemically combined to a readily soluble salt, makes it especially useful in articular and muscular rheumatism, gout, and, in larger doses, in neuralgias.

Finally, Walther states that pyrenol is used with benefit also in cardiac neuroses and subjective difficulties occasioned by cardiac affections.

The average adult dose is 7½ to 15 grains t. i. d. In pneumonia and typhoid 7½ grains every three hours is given; children get one-half and infants one-fourth of this dose in cold water, milk, etc.—Abstracted from *Therap. Neuheiten,* No. 3, 1906.

A Perfect Surgical Lubricant.—The surgeon of to-day knows that absolute sterility greatly increases the chances of his patient's recovery. No germs must be allowed to come in contact with the open wound or the mucous surface, and in no one particular is greater discrimination shown than in the selection of the lubricant. The oily, insoluble lubricant no longer satisfies. It must be sterile, soluble, neutral in its reaction, and possess healing properties.

Lubrikol, made from the best imported Irish Moss with the addition of Eucalyptus and Formaldehyde, answers all these requirements. In order that it may always be in a sterile condition and ready for use, it is put up in collapsible tubes only, which are themselves rendered thoroughly aseptic.

Lubrikol is the ideal lubricant for the surgeon, obstetrician, or gynecologist—in fact, is a perfect lubricant, possessing not one single objectionable feature. Manufactured only by J. M. Grosvenor & Co., Boston, Mass., proprietors Bell-cap-sic Plasters, Konseals, etc.

The enterprise and courage of the members of the San Francisco drug trade were clearly exemplified during the recent disaster. Before the fire was extinguished they placed large orders with the manufacturing chemists. One house ordered 30,000 pounds of Antiphlogistine, and altogether over 100,000 pounds were shipped to the coast upon order within a week.

On a steamer from New York, running up the California coast at the time of the earthquake, were 35,000 pounds of Antiphlogistine, and upon orders from the home office the emergency hospitals were liberally supplied free of charge.

Have used your Resinol Soap and Ointment with much satisfaction. I have for years suffered at intervals with scalp itching, have used most everything, with no avail, until I tried a massage with the Ointment. The result was great: scalp easy, no dandruff, and hair ceases to fall out. I try to keep it on hand.—C. D. Driscoll, D.D.S., Paoli, Ind.

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ABILENA
is a natural aperient, being bottled just as it comes from the wells in Kansas.
It has a larger amount of cathartic salts in perfect solution than any similar water.
It is not unpleasant to the palate, and does not provoke griping or tenesmus.
Because of its relatively large content of pure sodium sulphate, its use is never followed by a period of reaction or constipation.
The dose is smaller than that of any other natural water.
SUPPLIED BY ALL DRUGGISTS
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By commingling lithia and sodium phosphate in proper proportions with certain of the "Bitter Water" salts, as represented by Sal Hepatica, a compound is secured that is superlatively more active than either the lithia or sodium salt alone, or, indeed, than any natural mineral water. Recognizing this, the most eminent practitioners latterly have taken to prescribing Sal Hepatica in preference to the natural waters, with the result that the remedial action of the latter is enhanced, the untoward manifestations accruing reduced to a minimum and their palatability materially increased.

Sal Hepatica is very effective in limiting and reducing the amount of uric acid formed within the circulation and excreted by the kidneys, and is very freely absorbed and taken into the blood and as rapidly (along with the chemical products formed) eliminated by the excretory ducts or organs as is readily demonstrated by its presence, after a brief course thereof, in perspiration and urine.

CHRONIC CATARRHAL DEAFNESS.—Those cases of deafness which give evidence of congestion and inflammation of the drum membrane externally as the source of the trouble always react well to the hot irrigation treatment. When the membrane exhibits patches of sclerosis in considerable amount, the treatment is more tedious. A solution of Glyco-Thymoline in 10-per-cent strength used at 100° will encourage active depletion of the congested area, restoring circulation of the minute terminal blood vessels and lymphatics. Action is evidenced in the increased secretion of cerumen. Tension is relieved and frequently the hearing is immediately improved. Catarrhal manifestations of the nasopharynx should always receive attention in these cases. Under this treatment tinnitus, if present, will be quickly relieved even though due to intratympanitic causes. There is generally more or less tubal occlusion in these women than was the faulty system of vencases which is in an indirect manner benefited by the Glyco-Thymoline irrigation.

In aural neuralgia of all types, irrigations should be followed by the application of Glyco-Thymoline full strength by means of a swab. After all treatments by irrigation, a small tampon of absorbent cotton saturated with Glyco-Thymoline should be inserted in the external meatus.

THE THERAPEUTICS OF AMMONOL IN TYPHOID.—The most interesting feature connected with the exhibition of Ammonol is in the treatment of malaria and typhoid and yellow fevers. There are fevers related to these three well known varieties which have as yet received no special description. I have had under my care cases of Chagres fever where Ammonol is simply unrivaled. The feature

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In Urethritis, Cystitis, Prostatic Troubles, difficult micturition etc.

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so valuable in this preparation—its antiseptic property wonderfully combined with its antipyretic and analgesic qualities, and this makes the remedy especially important for the treatment of Americans, sick in Porto Rico, Santiago, Havana, Manila and other places of our new territories.

Prof. Porter has recognized this property which Ammonol possesses and he makes use of it as an intestinal antiseptic. Since 1870 when Von Gieti, of Munich, urged the need of antiseptic treatment in the putrid infection of typhoid, medical men have slowly come to the conclusion that remedies with this object in view were of vital importance.—The Medical and Surgical Number of the *Army and Navy Journal,* August, 1899.

A FEW FACTS.—The expression, The "Best" Tonic, used in connection with Pabst Extract contains a suggestion of olden days which carries one back to the time of Jacob Best in 1844. Who could foresee that his small beginning would result in the mammoth Pabst plant of today: the plant where emanates one of the most widely known Malt Extracts on the market! It is logical to suppose, then, that the people at large are interested in the whys and wherefores of the success of this same "Best" Tonic, and it is our pleasure to satisfy that interest.

Pabst Extract, The "Best" Tonic, is a preparation whose ingredients are well known to the medical profession and the public at large. It is made from choicest malt and hops. Malt is made from barley, by making the grain sprout, thus producing certain chemical changes which add to its nutritive value and render it easily digestible. The sprouted barley is dried by gentle heat, to preserve its nutrition intact, and is then called malt. The food elements of this malt are converted, by scientific process, into liquid form, resulting in an extract which is added to lupulin, or the extract of hops. This combination forms one of the most valuable preparations known to science, and is called Pabst Extract, The "Best" Tonic.

The very fact that the Government Chemist and Board of Judges of the

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XXXVII

THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.

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Dose: Two tablespoonfuls ten minutes before each meal.

THE CHARLES N. CRITTENTON CO.,
Sole Agents,
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World's Columbian Exposition in 1903 declared Pabst Extract at the head of scientific malt foods, far in advance of anything in the way of malt extracts suited for food or medicine, and accorded it a mark of 100 points of perfection, speaks volumes. Needless to say its quality and perfection have been carefully fostered, the greatest caution being exercised to maintain the standard. This care is evidenced in the complete equipment of the plant in which the extract is made, no money or time being spared to add any new features in the way of machinery, etc., which will improve the product.

Pabst Extract, The "Best" Tonic, is strictly speaking a medicinal preparation, and as such is prescribed by many physicians in their daily practice. From actual tests it has proven its right to be called The "Best" Tonic, for it will aid digestion, help the invalid, produce natural sleep, help nervous people, feed nerves, combat exhaustion in nursing women, build up the convalescent, strengthen the delicate and overworked, and is equally efficient in maintaining the general health by combating the ills incident to the present high tension of living.

Although Pabst Extract has enjoyed and is still enjoying widespread favor with the medical profession, its value as a tonic has proven its best advertisement, and the sales have increased from year to year until to-day it is sold in almost every civilized corner of the globe.

TREATMENT OF CHRONIC ULCER OF THE LEG OF LONG STANDING.—By Horatio W. A. Cowan, M.B., C.M., Aberd. From the *Lancet,* London, Eng., July 2, 1904.—At the beginning of the present year I was called to a woman, aged 54 years, who had a chronic sloughing ulcer for 22 years situated on the outside of the left leg, some ten inches long and three inches wide, with indurated edges and some thrombosis of the veins of the inside of the knee. Having first cleansed the ulcer with charcoal poultices for two days I applied wet butter cloth and then spread Antiphlogistine over it, after which

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PAGES 29 AND 30.

cotton wool and a bandage were put on. This was done every day by the patient's friends for four months. The ulcer is now quite healed over and the induration is all gone. She is able to resume her ordinary housework. I publish this case in the hope that it might be useful to others, as Unna's paste and all sorts of methods had been previously tried. I may say that I have no personal interest in Antiphlogistine.

Every doctor has among his patients some one who is addicted to the excessive use of liquor. The great difficulty has been to find a remedy which would not leave the patient in worse condition than before administering. **ANTIDIPSOLE** will relieve the taste, restore the nerves to their normal condition, leaving the patient as well as before the habit was acquired. It is not a nostrum. The formula is on each bottle. Write **Peter-Neat-Richardson Co.** for particulars. (Louisville, Ky.)

IN the former treatment of genitourinary affections much importance was attributed to a class of remedies which collectively were termed urinogenitals, and of which copaiba and cubebs are prominent representatives. While there can be no doubt that these drugs exert a beneficial effect in many inflammatory conditions of the mucous membrane of the urinary tract, it is equally true that their indiscriminate and excessive employment has been often responsible for injurious sequelæ. Many a case of protracted gastric catarrh has owed its origin to these drugs, while their irritating effects upon the kidneys have not infrequently given rise to renal disease. Moreover, the developments of bacteriology in recent years have done much to change our views as to the origin of many affections of the genitourinary system. Instead of regarding the various forms of urethritis and cystitis of simple catarrhal nature, we are now taught to consider them as due to infection by various microörganisms, and especially the gonococcus.

Conformably to these newer ideas it became the main object of treatment to destroy these infectious organisms, both by local application of antiseptics and, if possible, their internal administration. Most of our topical antiseptics, however, are inapplicable for internal use owing to their injurious effect upon the tissues, and hence it became a desideratum to find an internal antiseptic which, while powerful enough to destroy the bacteria, would be innocuous.

At the present time there is only one drug which conforms to these requirements, and that is hexamethylen-tetramin, or ammonium formaldehyde. This substance splits off formaldehyde in the urine, sterilizing it and also destroying any organism with which it comes in contact in

its passage over the mucous membrane. Hexamethylen-tetramin has the advantage of being comparatively non-irritating in the doses ordinarily employed, and may be regarded as a most efficient internal antiseptic in the diseases under consideration.

It has been made the basis of a very excellent preparation known as uriform, in which it is associated with the two best urinogenitals, sandal wood and saw palmetto. These two remedies act as very valuable auxiliaries to hexamethylen-tetramin by exerting a salutary influence upon the vesical and urethral mucous membranes during their elimination.

Uriform, therefore, may be regarded as a very logical combination of several of the most efficient remedies for the treatment of cases of vesical catarrh, posterior urethritis, prostatitis, seminal vesiculitis and the like. In chronic cystitis its action is to keep the urine sterile, and at the same time to reduce the inflammatory process, which depends, in great part, upon the fermentation of the urine, while in chronic posterior urethritis and prostatitis its administration will aid materially the local treatment. There is another type of cases which is materially benefited by the use of uriform, and that is neurasthenia of sexual origin, which is often dependent upon a chronic inflammatory condition of the urethra, prostate, and seminal vesicles.—*International Journal of Surgery*, August, 1903.

Eulenburg's "Encyclopädische Jahrbücher der gesamten Heilkunde," 1906, says regarding pyrenol:

"It continues to demonstrate its trustworthiness, especially in bronchial asthma and pertussis. It prevents pulmonary complications and loosens expectoration, as for instance in bronchial catarrh. In angina pectoris it exercises a sedative effect. It can be used in phthisis cases, but it may be well to avoid it if hemoptysis threatens."

Keiner (*Münch. Med. Woch.*, July 24, 1906) says that in the Dortmund Municipal Hospital pyrenol was found to be the most effective of all the remedies for croupous pneumonia. Cases admitted on the third and fourth days of the disease ran a prompt course when pyrenol in 7½-grain doses was given every two or three hours. He has been favorably impressed by its therapeutic efficiency and is convinced of its pertinency and harmlessness.

In Prof. Schwalbe's "*Jahrbuch der Praktischen Medicin*," 1905, Prof. H. Cloetta, of Leipzig, reviews the reports that have been published on exodin and expresses his own opinion on the remedy as follows:

"It is a fact that the use of exodin is not attended by any symptoms of irritation; the passages follow without disturbances of any kind and are in the nature of normal evacuations."

Frederick C. Shattuck, M.D., Jackson Professor of Clinical Medicine in Harvard University, says in a paper on "The Value of Drugs in Therapeutics" (*Boston Medical and Surgical Journal*, March 29, 1906) that some useful synthetic compounds have been discovered and more will be discovered. Who can count the number of cases of typhoid which have originated through the urine of a previous patient? This is a danger against which urotropin, rightly used, seems to afford absolute protection. For the past eight years his patients have all had 7 to 10 grains urotropin thrice daily, two successive days of each week, until convalescence was complete. In no case has harm resulted. Were the practice universal, there would be less typhoid, the prevalence of which is a reproach to our civilization.

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While it is true that modern architecture has greatly improved the hygienic condition of the study-rooms, it is highly probable that the present rush and hurry methods of instruction are even more injurious to the physical state of our young tilation until recently endured.

The worry and excitement attendant upon present-day school life is, undoubtedly, the prime cause of a governing percentage of the neurotic disturbances which are so prevalent among the women of America. In fact, it is quite within the bounds of truth to assert that many of the diseases which present themselves to the gynecologist have for their origin a nervous system rendered bankrupt by strife in our temples of education.

Mental overstrain, when enforced day after day, soon renders the nerve structure incapable of absorbing adequate nourishment from the blood stream. Ultimately, nervous vitality is almost completely exhausted, and depression, gloom, languor, and mental impotence ensue.

As the taxation is extended, the condition grows worse until anemia, anorexia, insomnia, melancholia, and, perhaps, hysteria develop.

Inasmuch as it is not within the power of the physician to remedy this evil system of handling our young women, it remains for him to evolve means of attenuating, as far as possible, the injury done, and preventing the development of lasting diseases which have their origin in the shattered nervous system.

This is best accomplished by the upbuilding of the psychical and physical resources of the individual. Not by the employment of stimulants which act ephemerally upon the organism, but by encouraging functional activity to its maximum degree consistent of course with normality.

Obviously, this must be done by maintaining the entire digestive system at its proper standard, for it is through these channels that vital force is obtained and the well-being of the economy is preserved.

It is not consistent with logic to achieve this end by resort to the employment of those agents which relieve the digestive secretions of their special provinces. On the contrary, it is the very extreme of indiscretion to encourage dependency of the gastric or intestinal fluids, or to aid them in the performance of their duties beyond very circumscribed limits.

Quite the most rational course to pursue is that of extending to nature gentle but ample encouragement through the administration of an agent which is capable of bringing functional activity to its highest point without entailing the necessity of prolonged drugging. It is supremely important that the drug be one that can be withdrawn without leaving the economy disqualified to maintain a normal fund of vital force.

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globin, but it substantially increases the capacity of the tissues to absorb and utilize the nourishment placed at their disposal by the circulatory system.

Further, iron, when administered in the proper form, augments functional activity throughout the entire digestive apparatus, and thuswise enables the economy to secure the full benefit of the food supply. To this action of the drug is due the greatest profit to the individual resulting from its use.

The objections applicable to some forms of iron gain added importance in this particular class of cases, for the reason that the peculiarities of the disorders under consideration are such as to be greatly aggravated by an improper form of iron.

Chief among these peculiarities is constipation, which is invariably a disturbing factor. The existing constipation is easily made worse by both the carbonate and acid solutions of iron; and, in fact, these forms of the drug are notably stool-discouraging. Digestive processes are also depressed by these forms of iron, and headache frequently follows their use.

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inflamed, ulceration on os and floor of vagina; constant pain in lumbar region; severe nervous phenomena; profuse discharge. Had tried formaldehyde, zinc sulphate, nitrate of silver applications, pure carbolic, ichthyol, etc., without anything more than temporary relief. Condition had existed since early in November.

Glyco-Thymoline applied by means of tampon of cotton saturated; this application following a douche of water (110° F.) two quarts, Glyco-Thymoline about four ounces. Tampon applied twice a day and allowed to remain in position three hours. Relief experienced, especially from pain and nervous symptoms, in twenty-four hours. Improvement steady with no setbacks till January 10, when tampons were omitted and douches (three per day) only continued.

January 29. Examination revealed no inflammation, no discharge, entire relief from backache and nervous symptoms.

Case 2.—Mrs. E. Same conditions prevailed as in Case 1, only environment not so favorable. This patient not so able to care for herself as the one previously reported.

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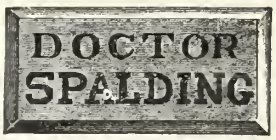

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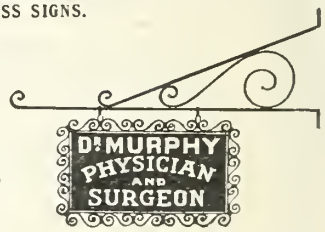

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PAGES 27 AND 28.

ANTIDIPSOLE, as its name indicates, is a remedy for the excessive use of liquor. It acts promptly and safely, and takes away absolutely the taste for liquor, leaving the man as free as before the habit was acquired. It is not a secret preparation; the formula is on every bottle. If you have a case, give it a trial. PETER-NEAT-RICHARDSON CO., Louisville, Ky., will be glad to send you booklet giving full particulars. Write them.

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My method of treatment is as simple as it is effectual, and any doctor after reading my description attentively can use it as well as I can and cure every case. Once daily I fill the ear with a warm solution of some good peroxide of hydrogen, beginning with a 25-per-cent solution, and increasing the strength every day until the pure drug is used. Hydrozone is the same, only twice as strong, and I use it when I can get it simply from motives of economy. After cleansing the ear thoroughly, which at first may require from twenty minutes to two hours, according to the foulness of the auditory canal, I then instil a few drops of Glycozone (warmed) and close the canal securely with a bit of absorbent cotton. This is allowed to remain *in situ* until the next treatment.

The first cleansing should be very thorough, the peroxide being repeatedly instilled until all foaming ceases. In some cases it may require two, three or more treatments to cleanse the ear properly, especially if the lumen be occluded by a furuncle, or by swelling, or inspissated discharge. Do not be discouraged by any little difficulty like this, keep right on and you will finally succeed in getting the ear *clean*. After that, it is plain sailing. Thenceforth the daily treatment need not consume more than ten to twenty minutes. It is better to treat the case every day, but I have had good success with patients who

could not come oftener than once a week. Do not give the patient medicine to use at home and expect to cure him; and never tell him what you are using.

When the diseased ear has once been thoroughly cleansed I consider my work as half done. Thenceforth improvement is usually very rapid, even old inveterate cases yielding in a few weeks. Relapses occur, but are easily managed, and I have seldom had a second relapse. Of course, mastoid disease, necrosis, polyps, etc., must receive appropriate treatment; but I have no hesitation in saying that all simple, uncomplicated cases (which include the vast majority of all cases under one year's duration) may be cured by this treatment if it is properly and thoroughly carried out.

Care must be taken to have the medicaments *warm* and not too hot—100° F. is about right—and to always stop up the ear with a bit of aseptic cotton before permitting the patient to leave the office. Be careful to use a piece of cotton of just the right size to securely close up the meatus; if too large it will work out, allowing the solution to escape and leaving the ear unprotected; if too small it will slip back into the canal and so fail of its effect.

Never syringe the ears in otorrhea; it is risky and useless. I usually drop a little warm solution of sodium borate—5 per cent—in the ear to prevent a slight stinging which sometimes ensues when active steps are taken. I also dry out the canal with cotton on an applicator, but this should be very carefully done with speculum, and the canal well lighted. These points are non-essentials, merely refinements which render the treatment a trifle more pleasant, perhaps, that is about all.

The general health will probably require overhauling, indications being met as they arise. It is a good idea to regulate and antisepticize the bowels as a routine measure, using salines and intestinal antiseptics—*e.g.*, the sulphocarbolates as needed. In the South, especially, malarial and other miasmatic affections will often need looking after; also any other existing disease may require attention, but it is presumed that the practician will know how to handle these.

We all ought to try to help each other; not one of us but has much to learn; and in these brief talks it is my principal aim to set an example for the rest, hoping my little crumbs may some day come back to me in the shape of seasonable aid from some brother who has a few pointers himself and, like me, is willing to "whack up."—F. E. BURGEVIN, M.D., Spiro, I. T. (Published by the *Kansas City Medical Record,* July, 1906.)

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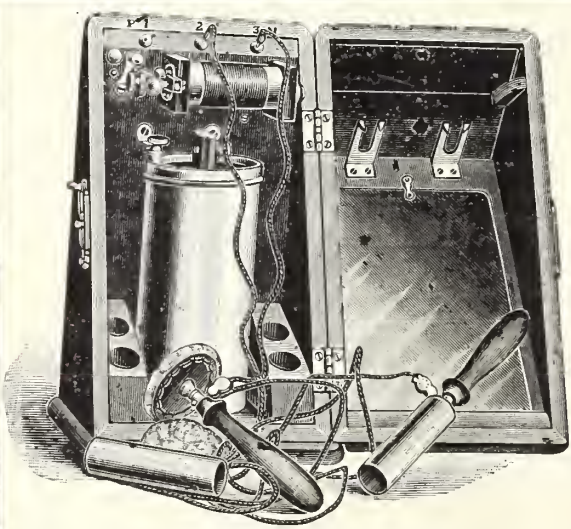

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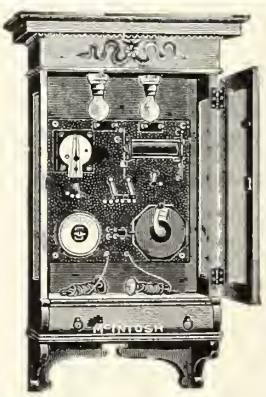

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LOCAL ANALGESIA IN OCULAR THERAPEUTICS.—In lecturing on the old and the new in ocular therapeutics, A. Maitland Ramsay, surgeon to the Glasgow Ophthalmic Institution, mentions only dionin under the head of local analgesics. He says: Dionin is a derivative of morphine and in five-per-cent solution is one of the most valuable agents which we possess for the relief of deep-seated pain—*e.g.*, in glaucoma, iritis, sclerotitis, etc. When dropped into the eye it causes at first a smarting and burning sensation, accompanied by chemosis of the conjunctiva and swelling of the lids. These symptoms are sometimes very pronounced and may alarm the patient greatly if he has not been forewarned of the probability of their occurrence and told that they speedily pass off. This lymphagogue property of dionin is intimately associated with its power as an analgesic, because only after a good reaction is there much relief of the pain. This property also explains its power in promoting absorption of inflammatory deposits in the cornea. Its action in this way, very satisfactory in itself, is greatly increased if it be used along with collargol. In the author's experience the best results are obtained when a five-per-cent solution of dionin is instilled in the morning and a disk of ten-per-cent collargol gelatin is placed in the conjunctival sac in the evening. He is satisfied that this method of treatment hastens the clearing of the cornea after an attack of ulceration or of interstitial keratitis.—*Lancet*, July 7, 1906.

UTERINE HEMORRHAGE: STYPTICIN.—Among the newer hemostatics there is one that has already established an enviable reputation, namely, stypticin. Dr. Carroll Chase (*Brooklyn Medical Journal*, Aug. 9, 1905) extols the use of this agent in uterine hemorrhage following labor or abortion, and finds that it frequently obviates the necessity of resorting to curettage. He obtained the best results by administering the stypticin in conjunction with hydrastinine hydrochloride. This experience merely echoes the good opinion which stypticin has won in the hands of numerous other observers, including Dr. H. J. Boldt (*New York Medical Journal*, Feb. 25). Stypticin is the short name for cotarnine hydrochloride, which is obtained by oxidation from narcotine, one of the alkaloids of opium. Coston (*Medical Council*, January, 1906) finds stypticin useful in all forms of internal bleeding except that due to portions of retained secundines, malignant disease, and polypoid growths. It probably owes its efficiency in controlling uterine hemorrhage to a stimulating effect upon the muscle tissue or blood-vessels of the uterus.

THE ROLE OF IRON IN THE NUTRITIVE PROCESS.—It is an established custom of physicians to administer iron whenever a patient with pale, waxy, or sallow complexion complains of extreme exhaustion, muscular feebleness, easily accelerated pulse, aphasia, anorexia, and the several symptoms which constitute the characteristic issues of a qualitative or quantitative reduction of the corpuscular elements of the blood.

Such symptoms are unerring indications of anemia, and iron is beyond dispute a cure for that disorder. But while the chief therapeutic property of iron is

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that of an anti-anemic, the subordinate, or collateral, effects of the drug are manifold, and are worthy of far more consideration than they usually receive.

As a hemoglobin-contributor and multiplier of red blood-corpuscles, iron will doubtless forever stand supreme, but its utility is by no means restricted to anemic conditions, for one of the chief effects of iron—one quite often lost sight of—is its influence upon nutrition.

The primary effect of iron is a stimulation of the blood supply. This results from invigoration of the blood-vessels. As a consequence of a more active blood stream, the digestive capacity is increased and the nutritive processes are correspondingly improved. Subsequently, iron increases the amount of hemoglobin contained in the red corpuscles. This imported hemoglobin converts the systemic oxygen into ozone, and thuswise oxidation, upon which nutrition directly depends, is restored to its proper standard.

It is impossible to emphasize the fact too strongly that it is necessary to do more than increase the appetite to correct nutritive disturbances. A voracious appetite does not necessarily imply an extensive appropriation of nutriment. On the contrary, it is commonly observed that individuals who eat ravenously suffer, the while, a progressive loss in physical weight and strength, even in the absence of all exertions that might account for such losses. And while it is obviously needful to relieve the existing anorexia in order to arrest a loss of weight, it is likewise essential that the capacity to properly digest food be fully restored before the nutritive processes can proceed in befitting order.

The manner in which iron begets an increase in appetite has only recently been perfectly understood. The earlier observers entertained the belief that an increase in appetite results from the mechanical effect of iron, and that this mechanical effect never manifested itself unless the drug was administered in some acid form. Later investigators advanced the theory that this mechanical effect could be secured by rendering the drug either strongly acid or alkaline. Recent ob-

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servations have completely disproved the accuracy of both of those theories by inviting our attention to the indisputable fact that a neutral preparation of iron will relieve anorexia with greater celerity than will either an acid or an alkaline one. From the information gained from these observations we are impelled to admit that the increase in appetite attending the employment of iron is due solely to the increased oxidation induced by its entrance into the blood stream. Accepting this as being true, we can readily understand the manner in which iron exerts its happy effect upon the nutritive processes.

The aforesaid facts compel the admission that that preparation of iron which enters most rapidly into the blood stream is the one capable of producing the best results in all disturbances of nutrition. Acid preparations of iron diminish the alkalinity of the blood, thus depressing the distribution of nutriment, and alkaline preparations of the drug offend the mucous lining of the alimentary tract. For these reasons it is consistent with logic to extend preferment to that preparation of iron which is neutral in reaction. That preparation is the Pepto-Mangan (Gude).

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In those conditions of weakened digestive power where the function is unable properly to take care of the food supply, when to administer the ordinary forms of iron would be but to increase the digestive disturbance, Pepto-Mangan (Gude) may be prescribed without apprehension, as the preparation is tolerated by the weakest stomach. Being practically predigested, Pepto-Mangan is imme-

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diately absorbed by the mucous membrane and taken up by the blood without the necessity of the weakened function being called upon to prepare it for assimilation, and therefore the entire system, including the digestive function, is strengthened and reconstructed. As a nutrient tonic in digestive disorders Pepto-Mangan (Gude) has no equal.

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CASE OF SEPTIC INFECTION CONTROLLED BY GLYCO-THYMOLINE.—I will make no attempt at an article, but will offer a simple statement of facts that tells its own story:

Case 1.—Was called to see a young married woman, Mrs. B., aged twenty-four; found her with a temperature just under 105° F. She had met with an accident and injury to the abdomen a few days before. A careful examination showed macerated fetus. With the aid of an assistant the uterus was thoroughly curetted and irrigated with solution hydrarg. bichloride 1:10,000, but with unfortunately no material reduction of temperature; four irrigations of hydrarg. bichloride, same strength, offered no material improvement, and to myself and colleague the case seemed hopeless. I then irrigated the uterus with Glyco-Thymoline, full strength, and packed with gauze saturated with the same solution. The temperature, which was 104.8°, fell to 99.2° in two and one-half hours, and there was no discharge. This requires no comment from me or any one else. It simply shows that sepsis can be controlled and eliminated by Glyco-Thymoline, when the best of acknowledged germicides, bichloride of mercury, had failed.—OSCAR SPRISSLER, M.D., Philadelphia, Pa., January, 1901.

METRITIS, ENDOMETRITIS.—H. W. Garrison, M.D., of New York City, says: "Where I see the best results from the use of Glyco-Thymoline is in the various cases of gynecological work; here on the

mucous membrane I cannot do without it. In the treatment of ulceration of the uterus, cervix, or vagina the action is pleasant, quick, and permanent. In metritis I generally curette thoroughly, give a direct internal uterine injection of pure Glyco-Thymoline, and then tampon with same. My results could not be improved upon.

Kress & Owen Company, chemists, 221 Fulton Street, New York, manufacturers of Glyco-Thymoline, K. & O. Nasal Douches, Markasol.

Ichthyol in the Treatment of Angioneurotic Edema.—Angioneurotic edema, designated by Schlessinger hydrops, hypostrophos, is a serious disease, writes Frederick C. Forster, of West Southbourne, Bournemouth, because it may attack mucous membranes as well as skin, and sudden edema of the larynx may therefore occur and prove rapidly fatal, as in a case recorded by Morris. Tracheotomy was performed on three separate occasions for asphyxia due to edema, but the patient succumbed one night from a fourth attack before medical assistance could arrive.

Other cases have from time to time been recorded, notably one complicating enteric fever, reported by Drs. Martin and Gillies. The surgical importance of its visceral crises has been demonstrated by Professor Osler, and instances given in which laparotomy was performed for angioneurotic edema of the intestine, the symptoms closely simulating an acute abdominal lesion.

A nervous, unmarried lady, aged thirty-seven, sought advice with an eight years' history of evanescent swellings, neither inflammatory nor dependent on any injury. They usually occurred at fortnightly intervals on the face, chest, and upper arms, lasting about two or three days, and then disappearing. They occasioned no pain, but only a sensation of tingling and slight soreness. No therapeutic measures tried had either ameliorated the attacks or lengthened the intervals between them. He ordered ichthyol, gr. iij. in pill form, to be taken thrice daily. This she continued for two months, then twice a day for another month, and at present she is taking one each day. She writes that for the past three months she has had no recurrence.

The author is not aware that ichthyol has been tried for this disease, but was led to prescribe it because of its efficacy in controlling the "flushings," "vasomotor neuroses," and allied phenomena which are common at the menopause, when the vasomotor system appears to be the escape valve for pent-up nerve storms.

Though there was no evidence of any climacteric change in the patient, ichthyol proved beneficial. The author says it is too early to claim that the trouble is more than checked. He considers ichthyol worthy of a continued trial. Where angioneurotic edema is accompanied by gastro-intestinal disturbance, ichthalbin (an albuminate of ichthyol) may be more easily tolerated.—*British Medical Journal,* April 28, 1906.

X-Ray Burns.—At the 337th regular meeting of the New York Dermatological Society, held November 28, 1905, the subject of *x*-ray burns was taken up, and Dr. Henry G. Piffard, Emeritus Professor of Dermatology in New York University, said, according to the *Journal of Cutaneous Diseases,* that "he had obtained the most benefit in treating these conditions from Antiphlogistine, chloride of zinc, high-frequency current, and ultraviolet rays."

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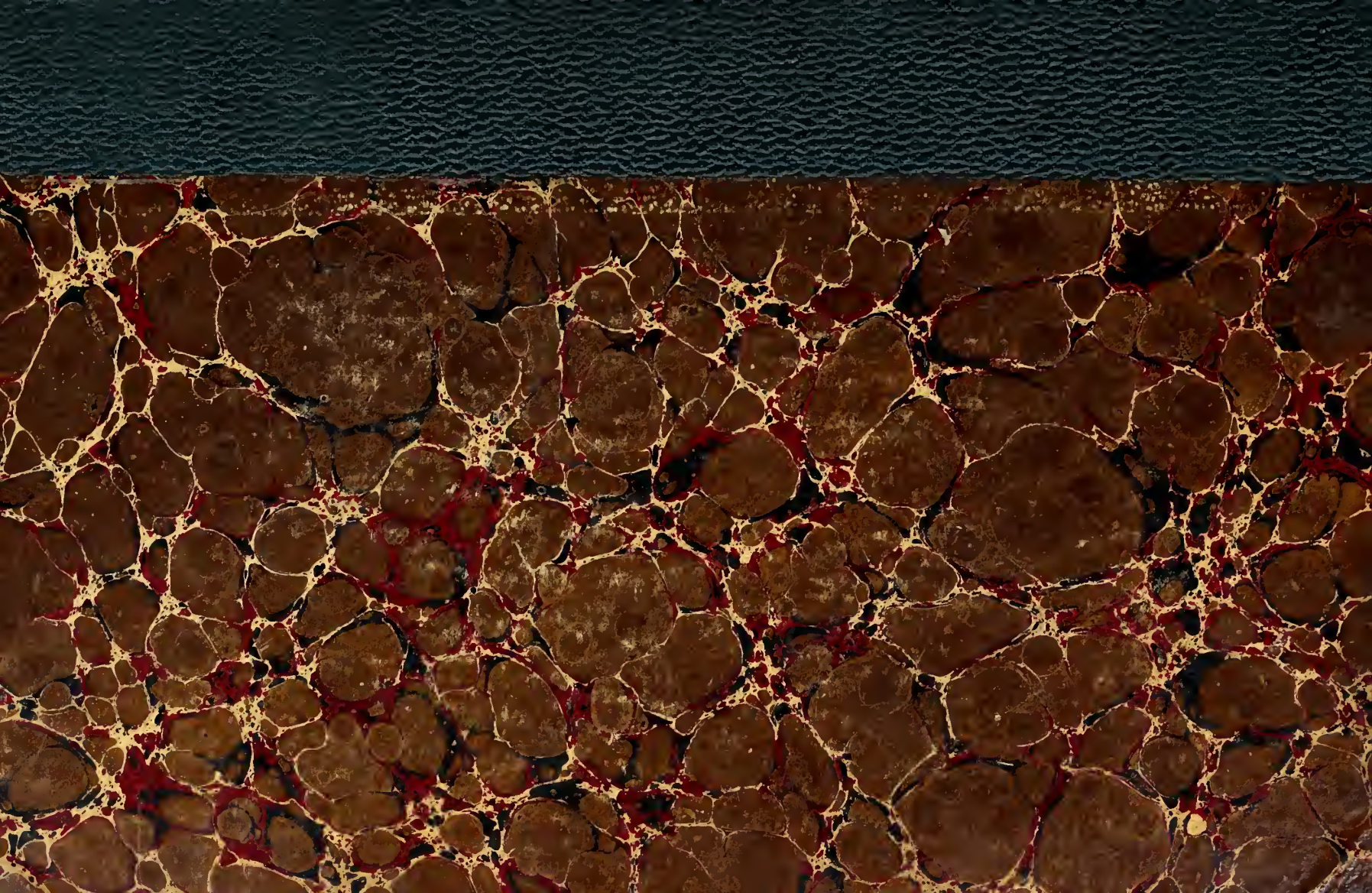
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